



THE 2ND ANNUAL

**SJSU ENGINEERING
TECHNOLOGY SHOWCASE**

MAY • 11 • 2019 SATURDAY
11AM-3PM

Presented by :  San Jose State University
College of Engineering

Computer Engineering
Electrical Engineering
Software Engineering

Sponsor: **8x8**

San Jose State University
Student Union Ballroom

Computer/Software/Electrical Engineering Technology Showcase Projects

Spring 2019

Computer Engineering Department

BS Computer Engineering/BS Software Engineering

Big Data/Data Science/AI

MusicAI

Steven Guan (BSSE), Thomas Luong (BSSE), Hiep Nguyen (BSSE), Jose Sandoval (BSSE)

Project Advisor: Fabio Di Troia..... 1

NFL Predictions

David Huynh (BSSE), Tommy Lin (BSSE), Monty Saengsavang (BSSE), Kevin Tieu (BSSE)

Project Advisor: Fabio Di Troia..... 2

Blockchain

AdTractor: A decentralized advertising network

Tuan Anh Le (BSSE), Cameron Taylor (BSSE), Tsering Dolkar (BSSE), Jiahao Liu (BSSE)

Project Advisor: Fabio Di Troia..... 3

Alethia

Vincent Diep (BSSE), Jenil Thakker (BSSE), Jonathan Van (BSSE)

Project Advisor: Younghee Park..... 4

Blockchain Car ID & Analytics

David Bit-heydari (BSCMPE), Phillip Rognerud (BSSE), Shawn Darrel Suarez (BSSE), Dominic Varakukala (BSSE)

Project Advisor: Gokay Saldamli 5

VeriPic

Riley Chetwood (BSSE), Chad Gorham (BSSE), Joleena Marshall (BSSE), Eric Scaramuzzo (BSSE)

Project Advisor: Fabio Di Troia..... 6

Healthcare

Ally

Dominic Dinh (BSSE), Alex Frank (BSSE), Filip Koperwas (BSSE)

Project Advisor: Badari Eswar 200

Smart City

BayPass - Mobile Transit Solution

Ayesha Khan (BSSE), Zhe Li (BSSE), Tim Roesner (BSSE), Hua Tong (BSSE)

Project Advisor: Mike Wu 7

Clean Street Smart City

Chris Chuck (BSSE), Himanshu Mehta (BSSE), Ritika Singhal (BSSE), Sophia Tan (BSSE)

Project Advisor: Jerry Gao..... 8

Earthquake Early Warning

Robert Campbell (BSSE), Tai Dao (BSSE), Patrick Garcia (BSCMPE), Vivian Leung (BSSE)

Project Advisor: Ron Mak..... 9

Firefighter Finder

Luke Dillon (BSCMPE), Zijian Guan (BSCMPE), Troy Kurniawan (BSCMPE), William Wong (BSCMPE)

Project Advisor: Kaikai Liu..... 10

Grouch.io

Mitch Avery (BSCMPE), Ryan Moore (BSCMPE), Charles Leon (BSSE), Aaron John (BSSE)

Project Advisor: Badari Eswar..... 11

Improving Pedestrian Safety Using Smart Camera

Jesus Alvarez (BSCMPE), Ziyun He (BSSE), Jeong Ook Moon (BSCMPE)

Project Advisor: Kaikai Liu..... 12

NeighborGood

Quang Tiep Du (BSSE), Yihua Li (BSSE), Renjie Ye (BSSE), Shunyu Zhao (BSSE)

Project Advisor: Fabio Di Troia..... 13

Search and Rescue Hexapod

Tri Pham (BSCMPE), Huy Tran (BSCMPE), Minh Quan Tran (BSCMPE), Toan Tran (BSCMPE)

Project Advisor: Frank Lin..... 14

Sense

Devanshi Sukhadia (BSSE), Sara Akhtar (BSSE), Cindy Ho (BSSE), Junia Ikeh (BSSE)

Project Advisor: Ahmed Banafa..... 15

Sign Language Companion Translator

Jesse Chen (BSCMPE), Linda Nguyen (BSCMPE), Danny Nuch (BSCMPE), Preyrna Yadav (BSCMPE)

Project Advisor: Magdalini Eirinaki..... 16

SJSUList

Atef Alrwashdeh (BSSE), Jorge Murillo Carranza (BSSE), Tahsin Hossain (BSSE), Saad Siddiqui (BSSE)

Project Advisor: Fabio Di Troia..... 17

Smart Attendance Tracker

Akash Vachhani (BSCMPE), Priyank Varshney (BSCMPE), Albert Zarate (BSCMPE)

Project Advisor: Frank Lin..... 18

Spartan Park

Peter Hwang (BSSE), Steven Louie (BSSE), Nicholas Mangoba (BSCMPE), Hun Zaw (BSSE)

Project Advisor: Badari Eswar..... 19

TrafficSkip

Phat Nguyen (BSSE), Steven Cao (BSSE)

Project Advisor: Kaikai Liu..... 20

Website for House Listing

Viet Nguyen (BSSE), Hoa Nguyen (BSSE), Quy Nguyen (BSSE), Minh Ngo (BSSE)

Project Advisor: Ron Mak..... 21

Where is My Car

Nguyen Bui (BSSE), Che Liu (BSSE), Xueli Yang (BSSE), Yanyan Yang (BSSE)

Project Advisor: Fabio Di Troia..... 22

Home/Office Automation

Facial Recognition for Smart Door Locks

Ameer Ali (BSSE), Ajay Curam (BSSE), Nicholas Kaiser (BSCMPE), Ryan Will (BSSE)

Project Advisor: Preetpal Kang 23

Multi-Agent Autonomous Cleaner Robots

Gabriel Baki (BSSE), Kimberly Flores (BSSE), John Milam (BSSE), Nikkitha Ravi (BSCMPE)

Project Advisor: Preetpal Kang 24

Real Time Smart Factory

Kristoffer Duque (BSCMPE), Derick Luong (BSCMPE), Kyle Ma (BSCMPE), Justin Stokes (BSCMPE)

Project Advisor: Kaikai Liu 25

User Programmable Composite Oven

David Brassfield (BSSE), Chad Palmer (BSCMPE), Nicholas Ramirez (BSCMPE)

Project Advisor: Frank Lin 26

Web-based Financial Management Service

Shivangi Agarwal (BSSE), Crystle Johnson (BSSE), Sandya Manickam (BSCMPE), Ira Sharma (BSSE)

Project Advisor: Ahmed Banafa 27

Application

TuTour

Alan Boo (BSSE), Josh Kardos (BSSE), Philip Nguyen (BSCMPE), Gideon Ubaldo (BSSE)

Project Advisor: Kaikai Liu 28

Genio

Bruce Lin (BSSE), Jennifer Nguyen (BSSE), Nhat Trinh (BSSE), Truc Vo (BSSE)

Project Advisor: Fabio Di Troia 29

LearnUp

Shayan Ahmed (BSSE), Ian Duron (BSSE)

Project Advisor: Gheorghii Guzun 30

MentorCrowd

Andrew Kyu (BSCMPE), Cindy Wang (BSCMPE), Stephen Lawrence (BSCMPE)

Project Advisor: Gheorghii Guzun 31

MRS: A Video Game Console

Maytinee Apiwansri (BSCMPE), Regine Firmeza (BSCMPE), Stefanie Lau (BSCMPE)

Project Advisor: Frank Lin 32

Formation Viewer

Lianshi Gan (BSSE), Samuel Lau (BSCMPE), Matthew Morin (BSSE), Sanjana Shetty (BSSE)

Project Advisor: Robert Bruce 34

Hardware Design

SJSU Robotics - Mimic Arm Controller

Ari Koumis (BSCMPE), Zackery Plovanic (BSCMPE), Raul Cardona (BSCMPE), Allen Van (BSCMPE)

Project Advisor: Frank Lin 35

PID FPGA Implementation

Matthew McCormick (BSCMPE), Wyatt Ogden (BSCMPE)

Project Advisor: Ahmet Bindal 33

Computer Engineering Department

MS Computer Engineering/MS Software Engineering

Big Data/Data Science/AI

A Machine Learning Based Support Ticket Management System with Easy-to-Integrate Plug-in

Ankit Bharadiya (MSSE), Madhurika Joshi (MSCMPE), Rajan Mishra (MSCMPE), Rutvik Pensionwar (MSSE)

Project Advisor: Gheorghii Guzun 36

Artificial Fashion Synthesis using Generative Adversarial Networks

Srinivasan Desikan (MSCMPE), Shivangi Gupta (MSCMPE), Keerthana Manjunatha (MSCMPE), Sannisth Soni (MSSE)

Project Advisor: Magdalini Eirinaki 37

Applying Sonification to Code Quality and Data Mining: The Music Is the Message

Steve Stilson (MSSE)

Project Advisor: Weider Yu 38

Banking Transaction Recommendation Engine

Venkata Rishith Royal Dande (MSSE), Venkateswara Raju Datla (MSCMPE), Pranith Kiran Kouda (MSSE),

Sri Harsha Vanga (MSSE)

Project Advisor: Richard Sinn 39

Drone Based ML Training Dataset Collection

Yue Yin (MSSE), Ye Yuan (MSSE), Yiming Zhai (MSSE)

Project Advisor: Charles Zhang 40

EventPlus - AI and ML powered event management for enterprise

Divya Bharti (MSSE), Manvitha Challagundla Varadarajula (MSSE), Arshiya Sethi (MSSE), Manasi Vinay Thakur (MSSE)

Project Advisor: Rakesh Ranjan 41

FiscalBook-ML powered governance and regulation for SMBs

Maulik Bhatt (MSSE), Palash Hedau (MSSE), Aman Ojha (MSSE), Mangesh Tak (MSSE)

Project Advisor: Rakesh Ranjan 42

Forecasting of SMEs Financial Status With Socio-Economic Data

Rajvi Modh (MSSE), Chandan Paranjape (MSSE), Keval Nimeshkumar Shah (MSSE),

Sunnykumar Hemantkumar Udhani (MSSE)

Project Advisor: Weider Yu (Ishie Eswar) 43

Image Descriptor Model using NLP

Shantagouda Kuntoji (MSSE), Rajeev Vilas Patil (MSSE), Prasun Saxena (MSSE), Abhishek Yadav (MSSE)

Project Advisor: Dan Harkey 44

Intelligent Music Composer

Hunter Hsieh (MSSE), Liu Hsien Fang (MSSE), Tsung-Min Huang (MSSE), Jiaqi Qin (MSSE)

Project Advisor: Magdalini Eirinaki 45

Keyword Spotting - Audio and Video Analysis

Zeeshan Ali (MSSE), Vasu Bansal (MSSE), Mandipsinh Gohil (MSSE), Anav Sharma (MSSE)

Project Advisor: Dan Harkey 46

LawyerUp - AI Powered Chatbot to Find Lawyers

Sanjay Karnati (MSSE), Vinod Katta (MSSE), Hari Krishna Pariveda (MSSE), Vishal Vannada (MSSE)

Project Advisor: Charles Zhang 47

Machine Learning Methods for Urban Traffic

Rohan Kelkar (MSSE), Pavan Kothawade (MSSE), Pritam Meher (MSSE), Ishaan Singh (MSSE)

Project Advisor: David Anastasiu 48

MARK - A Platform for Big Data Analysis

Raghavendrakumar Anandan (MSCMPE), Mohit Shah (MSSE), Anshit Sobti (MSSE), Kshitij Sood (MSSE)

Project Advisor: Younghee Park..... 49

ML Powered Analysis of Voters and Polls and Their Impact On Citizen Matrices

Abhijitsinh Umedsinh Chavda (MSSE), Akash Gupta (MSSE), Arijit Mandal (MSSE), Niyatkumar Shashikant Patel (MSSE)

Project Advisor: Rakesh Ranjan 50

Online Mobility Pattern Prediction

Trung Huynh (MSSE), Tri Ninh (MSSE), Tai Pham (MSSE), Yanjun Zang (MSSE)

Project Advisor: David Anastasiu 51

Pathfinder - ML Powered Career Profiler

Suhas Shivappa Hunsimar (MSSE), Ameya Vasanttrao Nawale (MSSE), Saket Vinod Relan (MSSE), Hanisha Thirtham (MSSE)

Project Advisor: Rakesh Ranjan 52

Predictive Analytics on Stack Overflow Tags

Sampath Lakkaraju (MSSE), Shripal Modani (MSSE), Lakshmi Devi Palanivelu (MSCMPE),

Rajeshri Dattatraya Sonwane (MSSE)

Project Advisor: Weider Yu (Richard Sinn)..... 53

Real-Time Traffic Light Detection and Tracking for Autonomous Vehicles

Virat Mathur (MSCMPE), Miraj Asit Patel (MSSE), Dixita Patodiya (MSSE), Anisha Vaghela (MSSE)

Project Advisor: Gheorghii Guzun..... 54

Recommendation System for Newly Released Movies

Rohan Athavale (MSSE), Madhur Gor (MSSE), Anurag Panchal (MSSE), Milind Ravindra Patel (MSSE)

Project Advisor: Gheorghii Guzun..... 55

Reinforcement Learning Accelerated Smart Scheduler Design

Chhavi Mehta (MSCMPE), Srividhya Prakash Rangarajan (MSCMPE), Badenkal Saurabh Ravindra (MSCMPE),

Priyanka Subramanyam (MSSE)

Project Advisor: Hyeran Jeon 56

Smart Illegal Dumping Detection

Siddharth Chawla (MSCMPE), Akshay Dilip Ghodke (MSCMPE), Joshua Skow (MSCMPE),

Vishal Govindraddi Yarabandi (MSCMPE)

Project Advisor: Hyeran Jeon 57

Training a Machine to Color a Black and White Image

Harika Reddy Billuri (MSCMPE), Sai Sree Vaishnavi Chittoori (MSCMPE), Tanmay Raoji Shinde (MSCMPE),

Neeraj Venugopal (MSCMPE)

Project Advisor: Ron Mak..... 58

Vision Analytics on the Edge

Raghvendra Dixit (MSSE), Mithun Harikumar Nair (MSSE), Sahil Sharma (MSSE), Pavan Kumar Shekar (MSSE)

Project Advisor: Kaikai Liu 59

Vision Assistant

<i>Anudeepa Dinesh (MSSE), Rakhee Anugrah Narayan Singh (MSSE), Indira Priyadarshini Bobburi (MSSE), Radhika Srinivasan (MSSE)</i>	
Project Advisor: Ron Mak.....	60

Vision Based GPU Enhanced Road Detection with Learning for Self-Driving

<i>Santoso Danny (MSCMPE), Hang Huy (MSCMPE)</i>	
Project Advisor: Harry Li	61

Visual Search

<i>Avadh Boriya (MSCMPE), Sai Supraja Malla (MSSE), Rikitha Manjunath (MSCMPE), Vineela Velicheti(MSCMPE)</i>	
Project Advisor: Magdalini Eirinaki	62

Blockchain

Blockchain Based Public Record System

<i>Juan Chen (MSSE), Shaozhuo Jia (MSSE), Minglei Lu (MSSE), Shihan Wang (MSSE)</i>	
Project Advisor: Charles Zhang	63

Blockchain-Based Food Safety System

<i>Yifan Liang (MSSE), Dan Lu (MSSE), Yilin Miao (MSSE), Annan Wang (MSSE)</i>	
Project Advisor: Hungwen Li	64

Blockchain for digital libraries

<i>Eya Badal Abdisho (MSSE), Shilakha Dawar (MSSE), Neville Mascarenhas (MSSE), Vinit Kumar Singh (MSSE)</i>	
Project Advisor: Gokay Saldamli	65

Decentralized Certificate Verification Service Based on Hyperledger

<i>Nishantkumar Vinaykumar Bhalani (MSCMPE), Anuj Harishkumar Chaudhari (MSSE), Jay Bankimchandra Desai (MSSE), Tejas Harshadbhai Panchal (MSSE)</i>	
Project Advisor: Younghee Park.....	66

Distributed File System Using Blockchain

<i>Shikhar Gaur (MSSE), Viswanath Shivanand Kaddi (MSCMPE), Saloni Vijay Kajale (MSCMPE), Rohit Maheshwari (MSSE)</i>	
Project Advisor: Weider Yu (Richard Sinn).....	67

Healthcare Services Using Blockchain Technology

<i>Pavan Haravu Ramesh (MSCMPE), Jeevan Venkataramana (MSCMPE), Karthika Madhavanpillai Sasidharan Nair (MSCMPE), Roopashree Munegowda (MSCMPE)</i>	
Project Advisor: Gokay Saldamli	68

Identity Management using Blockchain

<i>Sumedh Sunil Deshpande (MSCMPE), Sohil Sanjay Mehta (MSCMPE), Pranjali Sanjay Raje (MSCMPE), Madhuri Shiva Kumar (MSCMPE)</i>	
Project Advisor: Gokay Saldamli	69

Micropayment Channel using Ethereum

<i>Mangesh Arunrao Ashtankar (MSCMPE), Niketa Mane (MSCMPE), Parag Pangare (MSCMPE), Sanructi Malleshappa Sobarad (MSCMPE)</i>	
Project Advisor: Younghee Park.....	70

Muidoc - Blockchain Based Document Verification System

<i>Manali Jain (MSSE), Varun Jindal (MSSE), Aartee Kasliwal (MSSE), Rudy Wahjudi (MSSE)</i>	
Project Advisor: Hungwen Li	71

OpenCloudChain - Decentralizing the Cloud utilizing Blockchain

Nikhilesh Chaudhary (MSSE), Phani Teja Kantamneni (MSSE), Arpit Mathur (MSSE), Arshiya Hayatkhan Pathan (MSSE)
Project Advisor: Simon Shim 72

Parametric Insurance using AI and Blockchain

Jainul Patel (MSSE), Divyank Shukla (MSSE), Divya Kalidasan Thazhathethil (MSSE), Manasa Chandra Sekhar Yedire (MSSE)
Project Advisor: Hungwen Li 73

Transparency in Pharmaceutical Supply Chain Management using Blockchain

Abhineet Gupta (MSSE), Anshul Patni (MSSE), Shashank Singh (MSSE), Vineet Zunjarwad (MSSE)
Project Advisor: Richard Sinn 74

User authentication using Blockchain technology

Raj Mansukhbhai Baraiya (MSSE), Neha Jethani (MSSE), Varun Ketanbhai Shah (MSSE), Divyang Jayeshkumar Soni (MSSE)
Project Advisor: Hungwen Li 75

VoteChain using BlockChain Technology

Niral Koradia (MSSE), Amita Mathkar (MSSE), Prathmesh Parmar (MSSE), Pradnya Sham Thorat (MSSE)
Project Advisor: Dan Harkey 76

Hardware Design

Accelerated Machine Learning with FPGA

Thinh Lu (MSCMPE)
Project Advisor: Donald Hung 77

Braccetto - Smart Embedded Arm

Wen Yuen Chao (MSCMPE), Lorenzo Javier (MSCMPE), Navoday Singh Tomar (MSSE), Anjali Vijayaraghavan (MSSE)
Project Advisor: Harry Li 78

Robotic Observer for Security Enforcement (ROSE)

Andrew Javier (MSCMPE), Luis Otero (MSSE), Matthias Reimann (MSCMPE), Sarvpreet Singh (MSCMPE)
Project Advisor: Preet Kang 79

Home/Office Automation

Alexa and Chatbot for Student Advising

Ritika Chadha (MSSE), Aastha Kumar (MSSE), Anjana Pradeep (MSSE), Ujjval Soni (MSSE)
Project Advisor: Dan Harkey 80

Alexa Feed Me

Heli Desai (MSSE), Monank Savaliya (MSSE), Jigar Soni (MSSE), Ashish Virani (MSSE)
Project Advisor: Richard Sinn 81

Healthcare

Ally - A Virtual Assistant for Alzheimer Patients

Kalikalyan Dash (MSSE), Satish Kumar Gollaprolu (MSSE), Shantanu Gupta (MSSE), Shiva Kumar Padma (MSSE)
Project Advisor: Ishie Eswar 201

Orientation and Mobility for the Deaf and Hearing-Impaired

Umang Kakaiya (MSCMPE), Uttara Vishwas Kulkarni (MSSE), Vishweshkumar Patel (MSSE), Nikita Sengupta (MSSE)
Project Advisor: David Anastasiu 82

TotalHealth - An Android application to help you achieve fitness goals

Kajal Agarwal (MSSE), Gaurav Chandra Debnath (MSCMPE), Spriha Deshpande (MSCMPE)

Project Advisor: Gheorghii Guzun..... 83

Cloud/System Applications and Infrastructure

An Investigation on Analysis of Real-Time Data

Harsh Rajesh Patel Aka Chaudhari (MSSE), Prateek Sharma (MSSE), Varun Upadhyay (MSSE), Vijay Yadav (MSSE)

Project Advisor: Weider Yu (Ishie Eswar)..... 84

Automating Microservices for Smarter Intrusion Detection

Tejas Chumbalkar (MSCMPE), Brandon Lee Gaerlan (MSSE), Yash Pamnani (MSCMPE),

Karthik Thirugnanam Jagadeesan (MSCMPE)

Project Advisor: Younghee Park..... 85

CampuSnap- A Personalized Campus Resource Platform

Xi Jiang (MSCMPE), Jason Lin (MSCMPE), Tai-Chun Wei (MSCMPE), Huayu Zheng (MSCMPE)

Project Advisor: Kaikai Liu..... 86

Cloudlet - Distributed Training Using Multiple GPUs

Omkar Kale (MSCMPE), Akil Khan (MSCMPE), Vishal Rajendra Shrivastava (MSCMPE), Abhilash Pandharinath Tuse (MSCMPE)

Project Advisor: Hyeran Jeon..... 87

Dish Master

Weiyu Jin (MSSE), Xiaoran Lin (MSSE), Ruifeng Sheng (MSSE), Mutian Wang (MSSE)

Project Advisor: Richard Sinn..... 88

Smart Load Balancing for Data Centers

Aravindhan Elayakumar (MSSE), Thejaswi Kampalli (MSSE), Amogh Ramaswamy (MSSE), Amey Sanjaykumar Totawar (MSSE)

Project Advisor: Hyeran Jeon..... 89

Smartan - The Virtual Assistant for SJSU

Akhil Bhavirisetty (MSSE), Sai Teja Desu (MSSE), Samhitha Yadav Mamindla (MSCMPE)

Project Advisor: Ishie Eswar..... 90

Socidia - Cloud-based Social Network Protection

Han Chen (MSSE), Wenqi Wang (MSSE), Shuyang Yu (MSSE), Na Yue (MSSE)

Project Advisor: Charles Zhang 91

Computer Engineering Department

MS Software Engineering (Special Session)

A Crowdsourcing Cargo Delivery Sharing Service with Encrypted Block-Chain-Style Backend

Lin Cheng (MSSE), Sy Le (MSSE), Yu Xu (MSSE)

Project Advisor: Dave Hood 92

Analysis of Mirai Malware and its Variants

Mahesh Kalappattil (MSSE), Ezhilkani Govindarajan (MSSE), Su Tan (MSSE)

Project Advisor: Fabio Di Troia..... 93

Compliance Buddy for Cloud: Ensures Service Providers are following GDPR & CCPA

Sushma Maryada (MSSE), Khurram Shazad (MSSE), Matan Levi (MSSE)

Project Advisor: Khurram Khani..... 94

Decentralized Identity System

Divya Sood (MSSE), Duc Nguyen (MSSE), Jin Liu (MSSE), Akila Radhakrishna (MSSE)

Project Advisor: Fabio Di Troia..... 95

EazyDine

*Harini Gobichettipalayam Balakrishnan (MSSE), Ravi Katta (MSSE), Anushri Srinath Aithal (MSSE),
Sunder Thyagarajan (MSSE)*

Project Advisor: Sanjay Garje 96

Intelligent Metric Discovery and Analysis

Swetha Chandrasekar (MSSE), Supreetha Ganapathi (MSSE), Puja Kawale (MSSE), Vijay Samuel (MSSE)

Project Advisor: Gopinath Vinodh 97

Intelligent Monitoring and Evaluation App for Children with Special Needs

Mudrita Chaturvedi (MSSE), Vidya Coimbatore Nand Kumar (MSSE), Anjana Eldo (MSSE), Anjana Kamath Miyar (MSSE)

Project Advisor: Sanjay Garje..... 98

Malware-enabling sandbox

VishnuPriya Ilango (MSSE), Chris Navarrete (MSSE), Rohit Chandra Tejaswi Kashibatla (MSSE)

Project Advisor: Fabio Di Troia..... 99

Pet Mate

*Barkha Choithani (MSSE), Pratik Shivaji Dhumal (MSSE), Avleen Singh Khanuja (MSSE), Rupal Martin (MSSE),
Tarun Shetty (MSSE)*

Project Advisor: Andrew Bond..... 100

Retail Analytics using Access Points

*Anu Sebastian Anu Sebastian (MSSE), Saloni Sharad Bhalerao (MSSE), Ravali Nagabandi (MSSE), Hemambujam
Veeraraghavan (MSSE)*

Project Advisor: Andrew Bond..... 101

Silver Snug - A Technology Companion for the Elderly

*Nidhi Jamar (MSSE), Sindhu Goudru Shivanandappa Patil (MSSE), Anuradha Rajashekar (MSSE),
Ashwini Shankar Narayan (MSSE)*

Project Advisor: Andrew Bond 102

Similar and Hazy Photo Identification

Himangini Agrawal (MSSE), Sourabh Namilikonda (MSSE), Chidananda Pati (MSSE), Hrishikesh Rendalkar (MSSE)

Project Advisor: Ali Arsanjani..... 103

Smart Healthcare System

Gagandeep Singh (MSSE), Abhi Yelipeddi (MSSE)

Project Advisor: Chandra Vuppalapati..... 104

Standards-based approach to leveraging and implementing decentralized identity

Nikhil Khare (MSSE), Sureshbabu Yella (MSSE), Vaishali Kale (MSSE)

Project Advisor: Fabio Di Troia..... 105

Study Buddy

*Manoj Kumar (MSSE), Yamini Muralidharen (MSSE), Shalini Narang (MSSE), Gyanesh Pandey (MSSE),
Madhusudhana Somu (MSSE)*

Project Advisor: Andrew Bond 106

Vulnerability Management Solution to help security teams manage the high number of security issues

Mohammad Al-Shehabi (MSSE), Amna Ziauddin (MSSE), Alex Farokhyans (MSSE), Samina Quazi (MSSE)

Project Advisor: Julie Tsai..... 107

Electrical Engineering Department

BS Electrical Engineering

Embedded System Applications

AR Clothing Modeling Display

Oscar Ji (BSEE), Andrew Lu (BSEE), Walter Santisteban Garcia (BSEE)

Project Advisor: Chang Choo..... 108

Electronic Scarecrow

Noah Ancheta (BSEE), Nikita Lal (BSEE), Robert Novak (BSEE), Desmond Wong (BSEE)

Project Advisor: Sotoudeh Hamedi-Hagh 109

Home security system

Thant Zin Phyoo (BSEE), Atanu Swarnkar (BSEE), Thaw Tin, Thaw Htet Zin (BSEE)

Project Advisor: Sotoudeh Hamedi-Hagh 114

Proximity Detector

Calvin Chang (BSEE), Yanbin Deng (BSEE), Andrew Huang (BSEE), James Shih (BSEE), Lucky Wen (BSEE)

Project Advisor: Sotoudeh Hamedi-Hagh 110

Smart medicine bottle

Gavin Mate (BSEE), Raphael Nolasco (BSEE), Kevin Richardson (BSEE)

Project Advisor: Ping Hsu 111

Smart pet feeder

Jorge Francisco (BSEE), Quan Le (BSEE), Hieu Ly (BSEE), Thoa Nguyen (BSEE)

Project Advisor: Chang Choo..... 112

Smart-Powered IOT Surveillance System

Cristian Chavez (BSEE), Kevin Leong (BSEE), Cho Thin (BSEE)

Project Advisor: Kwok Wong..... 113

Smart Sprinkler Controller

Amr Elsharief Elbakkay (BSEE), Steven Haertling (BSEE), Nihil Pudota (BSEE)

Project Advisor: Ping Hsu 115

The Jedi hand gesture car

Bailiang Kuang (BSEE), Ting Hui Lin (BSEE), Jennifer Ni (BSEE)

Project Advisor: Chang Choo..... 116

Electronic Devices

Ultra-low Power Bandgap Ref

Mikyong Chang (BSEE), Qiaoyun Sheng (BSEE), Jewel Sumabat (BSEE)

Project Advisor: Kwok Wong..... 117

Communication

Aviation Station Location Protection

Tristan Ellorin (BSEE), Naeem Mannan (BSEE), Anthony Pham (BSEE), Jiaxiang Xu (BSEE)

Project Advisor: Jonathan Ponniah 118

Light Data transmission system

Bedig Boghossian (BSEE), Raymond Domingos (BSEE), George Olagov (BSEE), Gray Robertson (BSEE)

Project Advisor: Sotoudeh Hamedi-Hagh 119

Power Electronics

Power Converter for Electric Vehicle

Kyle Christensen (BSEE), Ricardo Portals (BSEE), Cody Russell (BSEE)

Project Advisor: Mohamed Badawy..... 120

Power generation using piezoelectric material

Carrie Gong (BSEE), Charlene Magang Sidze (BSEE), Simran Mahendrakar (BSEE)

Project Advisor: Kwok Wong..... 121

Solar Energy Harvesting for Vehicle

Kyle Bennett (BSEE), Thao Nguyen (BSEE), Armand Tenkeu (BSEE), Vuong Trinh (BSEE)

Project Advisor: Kwok Wong..... 122

Spartan Hyperloop

Samuel Lee (BSEE), Mari Tateishi (BSEE), Nathan White (BSEE)

Project Advisor: David Parent 123

Electrical Engineering Department

MS Electrical Engineering

Communication, Digital Signal Processing & Machine Learning

A Framework to Analyze Energy Efficiency of Multi-band Spectrum Sensing Algorithms

Jay Patel (MSEE)

Thesis Advisor: Birsen Sirkeci 124

A Regularized Ensemble of Classifiers for Gas Sensors

Jerrin Djugash (MSEE), Krishna Chaitanya Govardhanam (MSEE)

Project Advisor: Birsen Sirkeci 125

Classification of Hyperspectral Colon Cancer Images Using Convolutional Neural Networks

Sean Mobilia (MSEE)

Thesis Advisor: Birsen Sirkeci..... 126

Cubesat UHF beacon SDR receiver

Duc Nguyen (MSEE)

Project Advisor: Robert Morelos-Zaragoza..... 127

Deep Learning for Space-time Codes in MIMO Systems

Lavanya Talluru (MSEE)

Thesis Advisor: Birsen Sirkeci..... 128

Fully Convolutional Network based Model in Hyperspectral Image Analysis <i>Sheng Zhu (MSEE)</i> Project Advisor: Birsen Sirkeci	129
Improving the Performance of ML models for Predicting Fracture Strength of Porous Ceramics <i>Praneeth Varma Alluri (MSEE)</i> Project Advisor: Birsen Sirkeci	130
Multi-Level Hyperspectral Image Classification Across Subjects using Machine Learning <i>Chandrabhas Soman (MSEE)</i> Project Advisor: Birsen Sirkeci	131
Neural Networks to Analyze the Fracture Strength of Ceramics and Glasses <i>Shruthi Kondeti (MSEE), Suvid Anand (MSEE)</i> Project Advisor: Birsen Sirkeci	132
Signal Detection and Demodulation at the Wireless Physical Layer using Deep Learning <i>Toluwanimi Odemuyiwa (MSEE)</i> Thesis Advisor: Birsen Sirkeci.....	133
Signal Modulation Identification with Machine Learning on Over the Air Samples <i>Umar Sohi (MSEE)</i> Project Advisor: Birsen Sirkeci	134
Small-length CRC codes and their applications in polar code decoding and RFID <i>Hongru Han (MSEE)</i> Project Advisor: Robert Morelos-Zaragoza.....	135
Vision based GPU Enhanced Road Detection with Deep Learning for Self Driving <i>Minh Duc Ong (MSEE)</i> Project Advisor: Birsen Sirkeci	136
<u>ASIC/VLSI Design Analog/Mixed-Signals ICs</u>	
66.6 GHz Variable Gain Amplifier Design in TSMC 65nm <i>Cuong Dao (MSEE)</i> Project Advisor: Sotoudeh Hamed-Hagh	137
A Low-Power 8 bit Pipeline ADC with 2.5b/Stage Built in TSMC 65nm Technology <i>Alexander DeHaan (MSEE)</i> Project Advisor: Sotoudeh Hamed-Hagh	138
An integrated Phase Shifter at 66 GHz in 65 nm technology <i>Khoa Huynh (MSEE)</i> Project Advisor: Sotoudeh Hamed-Hagh	139
Anomaly Detection System Using Machine Learning for Semiconductor Manufacturing Processes <i>Mrinmayi Gavali (MSEE), Chinmay Zare (MSEE)</i> Project Advisor: Lili He	140
DDR3 SRAM Memory Controller <i>Abhishek Phatak (MSEE), Rajesh Krishna Mundrupady (MSEE)</i> Project Advisor: Lili He	141

Design of 10 bit Successive Approximation Register ADC <i>Hoa Nguyen (MSEE)</i> Project Advisor: Sotoudeh Hamedi-Hagh	142
Design of 60GHz SPDT Switch for FMCW Transceiver Frontend on 65nm CMOS Technology <i>Thi Le (MSEE)</i> Project Advisor: Sotoudeh Hamedi-Hagh	143
Design of Low Noise Amplifier at 66GHz <i>Lava Kumar Bangalore (MSEE)</i> Project Advisor: Sotoudeh Hamedi-Hagh	144
Design of a Power Amplifier for 5G Communication System at 60GHz <i>Xing Mao (MSEE)</i> Project Advisor: Sotoudeh Hamedi-Hagh	145
Hardware Implementation of Activation Function for Neural Network using CORDIC Algorithm <i>Rakshith Anandkumar (MSEE), Ajay Mysore Nataraj (MSEE)</i> Project Advisor: Lili He	146
Machine Learning in TCAD for Semiconductor Fabrication Failure Troubleshooting <i>Bankapalli Yogeswara Sarat (MSEE)</i> Project Advisor: Hiu-Yung Wong.....	147
Noise Cancellation Using Windowing Technique <i>Lekhya Tata (MSEE), Karthik Govinda Raju (MSEE)</i> Project Advisor: Lili He	148
Op Amp Linearization Improvement for Wider Bandwidth Applications <i>Chad Santos (MSEE)</i> Project Advisor: Lili He	149
Signal Integrity Optimization of RF/Microwave Transmission Lines in Multilayer PCBs <i>Justin Le (MSEE)</i> Thesis Advisor: Lili He.....	150
<u>Logic/Digital & Embedded Systems</u>	
CNN Image Optimizer with FPGA <i>Aditya Sanjay Sangawar (MSEE)</i> Project Advisor: Thuy Le	151
Digital PHY Layer Implementation of a Wideband RF Receiver Circuit <i>Indu Kollamparambil Sudheer (MSEE)</i> Project Advisor: Thuy Le	152
Dynamically Configurable Pixel Pipeline for FPGA <i>Eakta Anchlia (MSEE)</i> Project Advisor: Lili He	153
FPGA Implementation of Sensor Fusion algorithm for object localization <i>Hemant Banjara (MSEE), Akshay Kurli (MSEE)</i> Project Advisor: Chang Choo.....	154

FPGA Implementation of SHA-3-512 bits <i>Karan Kartik Pandya (MSEE), Mrunmay Kothale (MSEE)</i> Project Advisor: Lili He	155
FPGA implementation of Surround Vision System in Autonomous Vehicle <i>Disha Anil Patil (MSEE), Ankith Seetaram Shetty (MSEE)</i> Project Advisor: Chang Choo.....	156
Functional and Performance Verification of AXI using UVM <i>Hiral Patel (MSEE)</i> Project Advisor: Lili He	157
Functional and Performance Verification of Convolutional Neural Network Calculator <i>Sangeetha Murali Chengaloor (MSEE), Pallavi Nagaraju (MSEE)</i> Project Advisor: Lili He	158
Functional and Performance Verification of DDR3 Memory Controller using UVM <i>Rajesh Tukaram Pawar (MSEE), Omkar Rajendra Palaskar (MSEE)</i> Project Advisor: Chang Choo.....	159
Functional Verification of AHB Neural Network System <i>Ryan Morrison (MSEE), Sasank Shouri Yerragolla (MSEE)</i> Project Advisor: Lili He	160
Network on Chip Verification using UVM <i>Deekshith Krishnegowda (MSEE), Namrata Deepakbhai Gadani (MSEE)</i> Project Advisor: Lili He	161
Optimization of FPGA based Deep Neural Networks <i>Anusha Kanakaraja Gupta (MSEE), Lathashree Gangadharaiah (MSEE)</i> Project Advisor: Chang Choo.....	162
Reusable Verification IP for LCD Controller <i>Naveen Shridharan (MSEE), Tushar Upadhyaya (MSEE)</i> Project Advisor: Lili He	163
The Design and Verification of Fault Tolerant Processor Using Triple Modular Redundancy <i>Bhargav Shashidhara Pandit (MSEE)</i> Project Advisor: Thuy Le	164
Verification of Low Level Mac <i>Sai Rama Krishna Nalla (MSEE), Leeladhitya Kandanti (MSEE)</i> Project Advisor: Lili He	165
<u>Networking</u>	
A Hierarchical Framework for Reducing Dynamical System Complexity <i>Alexander Yee (MSEE)</i> Project Advisor: Jonathan Ponniah	166
A Reputation Based Attack Mitigation/Filter <i>Shruti Mangipudi (MSEE), Lavanya Jagadish Hiremath (MSEE)</i> Project Advisor: Lili He	167

Aggregate Network Health Monitoring <i>Onkar Ravindra Deshpande (MSEE), Tushar Gokuldas More (MSEE)</i> Project Advisor: Juzi Zhao	168
Bandwidth Analysis in Data Center Networks <i>Soumya Muralidhar (MSEE), Sayali Girish Kulkarni (MSEE)</i> Project Advisor: Nader Mir	169
Creating virtual data center with secure VPC using AWS <i>Vihar Jayeshkumar Desai (MSEE), Zeel Vijaykumar Patel (MSEE)</i> Project Advisor: Juzi Zhao	170
Deep Learning based Web Application Firewall <i>Arsheen Fathima Khatib (MSEE), Ruchi Raikuni (MSEE)</i> Project Advisor: Juzi Zhao	171
Design and Analysis of SDN-Based Data Center Networks <i>Shivani Bhat (MSEE), Khushboo Hirpara (MSEE)</i> Project Advisor: Nader Mir	172
Detection of DDos Attack <i>Rachel Shankar Kotrannavar (MSEE), Hardik Ashok Mehta (MSEE)</i> Project Advisor: Lili He	173
Detection Of Smart Gray Hole attack using Machine Learning <i>Sunil Poyyagadde Rao (MSEE), Deepak Devaru Joshi (MSEE)</i> Project Advisor: Juzi Zhao	174
Dynamic Routing Protocol in UAVs using Q-learning <i>Mrinali More (MSEE), Pranati Kulkarni (MSEE)</i> Project Advisor: Jonathan Ponniah	175
IDS Assistant for IoT Devices <i>Adithya Karthikeyan (MSEE), Namratha Venkatesh Murthy (MSEE)</i> Project Advisor: Juzi Zhao	176
Implementation of LACP in SDN-Based Data Center Network architectures using OPNET <i>Vinuthakumari Gunderi Prabhakar (MSEE), Jyothsna Narahari Bhatt (MSEE)</i> Project Advisor: Nader Mir	177
Interface between Discrete Event-based and Discrete Time-based Simulators <i>Vipul Gargav (MSEE), Mridul Chopra (MSEE)</i> Project Advisor: Jonathan Ponniah	178
LACP Simulation in DCN <i>Mengxuan Wang (MSEE)</i> Project Advisor: Juzi Zhao	179
Multi-layer Security using Containerized Network Functions for Software Defined Networking <i>Aarti Pathak (MSEE), Shyam Kumar Kadiyam (MSEE)</i> Project Advisor: Juzi Zhao	180
NET – Network Enhancement Tool for Monitoring and Troubleshooting Networks <i>Priyanka Peter Wania (MSEE), Poonam Nigade (MSEE)</i> Project Advisor: Lili He	181

Network Automation with Zero Touch Provisioning

Parvathi Chandrasekhar (MSEE), Karthikeya Remilla (MSEE)

Project Advisor: Jonathan Ponniah 182

Network Health Monitoring and Forecasting using Deep Learning in Hybrid Cloud

Komal Uttamrao Patil (MSEE), Riddhiben Prajapati (MSEE)

Project Advisor: Jonathan Ponniah 183

Network Security Strategies

Akash Godbole (MSEE), Manish Ranjan Sahay (MSEE)

Project Advisor: Jonathan Ponniah 184

Network Slicing Using SDN & NFV

Pournami Puthenpurayil Rajan (MSEE), Jagdeep Kaur (MSEE)

Project Advisor: Nader Mir 185

Performance Analysis of Application Based Network slicing

Mansi Rajeshbhai Vankawala (MSEE)

Project Advisor: Nader Mir 186

Performance Analysis of Link Aggregation in the Structure of Data Center Networks

Sharvari Potnis (MSEE), Arvind Chettiar(MSEE)

Project Advisor: Nader Mir 187

Phishlimiter: A Phishing Detection Approach Using Machine Learning Techniques.

Chaitrali Deshpande (MSEE), Jigar Makwana (MSEE)

Project Advisor: Juzi Zhao 188

Routing in cluster based VANETs

Haely Shah (MSEE)

Project Advisor: Jonathan Ponniah 189

UAV Communication System

Karthikeya Gurudas Pai (MSEE), Nikhil Shivamurthy (MSEE)

Project Advisor: Jonathan Ponniah 190

Virtual network mapping in flexible optical networks

Lenin Reddy Posham (MSEE), Varsha Ajay Kohirkar (MSEE)

Project Advisor: Juzi Zhao 191

Use of UAV Adhoc Networks for Handling Communication during Disasters

Isha Kadam (MSEE), Sheetal Shashikant More (MSEE)

Project Advisor: Jonathan Ponniah 192

Web Server (WordPress Site) and Serverless Website hosting using AWS

Jinal Desai (MSEE), Rahi Patel (MSEE)

Project Advisor: Juzi Zhao 193

Controls and Power Electronics

Design and Implementation of a Novel Multilevel Converter for Storage Cells Management in EVs

Neeshitha Sudhakar (MSEE)

Project Advisor: Mohamed Badawy..... 194

Digital Control for Cascaded Buck Boost Converter

Franklin Velasquez Alvarenga (MSEE)

Project Advisor: Mohamed Badawy..... 195

Operation and Control of Wireless Power Transfer System for Electric Vehicles

Na Na (MSEE)

Project Advisor: Mohamed Badawy..... 196

Optimization of PCB for a Cascaded Buck-Boost Converter for Power Factor Correction

Michael Lopez (MSEE)

Project Advisor: Mohamed Badawy..... 197

Partial Power Processing Architecture for a Partially Shaded PV String

Nitin George Thomas (MSEE)

Project Advisor: Mohamed Badawy..... 198

PWM Control Implementation of Multilevel Converter for Electric Vehicle Applications

Anthony Watson (MSEE)

Project Advisor: Mohamed Badawy..... 199

18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1

19	50
20	49
21	48
22	47
23	46
24	45
25	44
26	43
27	42
28	41
29	40
30	39
31	38
32	37
33	36
34	35

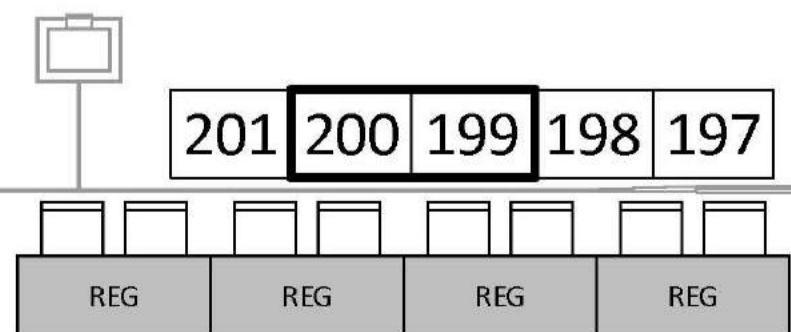
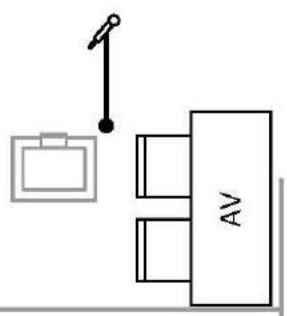
51	82
52	81
53	80
54	79
55	78
56	77
57	76
58	75
59	74
60	73
61	72
62	71
63	70
64	69
65	68
66	67

83	114
84	113
85	112
86	111
87	110
88	109
89	108
90	107
91	106
92	105
93	104
94	103
95	102
96	101
97	100
98	99

115	146
116	145
117	144
118	143
119	142
120	141
121	140
122	139
123	138
124	137
125	136
126	135
127	134
128	133
129	132
130	131

147	178
148	177
149	176
150	175
151	174
152	173
153	172
154	171
155	170
156	169
157	168
158	167
159	166
160	165
161	164
162	163

179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196



ENTRANCE

8X8 Table

