Sravan Balaji

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Education

- **University of Michigan** Ann Arbor, MI
  B.S.E. in Mechanical Engineering and Computer Science; GPA: 3.757 *Sep. 2016 – Dec. 2020*
  - Autonomous Robotics Lab, Mobile Robotics, Computer Vision, Design of Digital Control Systems

Work Experience

- **Hughes Network Systems** San Diego, CA
  Software Development Intern *May 2019 – Aug. 2019*
  - Created Windows GUI app in C# employing .NET framework; automated mobile terminal configuration process to reduce user involvement, prevent errors, and decrease configuration time
  - Implemented location based services on terminal software written in C; leveraged MQTT-SN protocol to provide low-cost method of sending GPS data to server

- **Rivian** Plymouth, MI
  Business Technology Intern *May 2018 – Dec. 2018*
  - Introduced and designed an internal website to collect and display data from business systems utilizing Python and Django; worked with REST APIs to present reports of issues by severity
  - Led effort to migrate IT team to a new service desk; worked with Jira Service Desk to automate triage and assignment of IT tickets; increased ticket resolution rate within SLA targets from 70% to 95%

Research

- **Compliant Systems Design Lab** Ann Arbor, MI
  Research Assistant *Jan. 2019 – Apr. 2019*
  - Formulated and conducted an experiment to investigate applicability of digital image correlation (DIC) for analyzing strain in fiber reinforced elastomeric enclosures (FREEs)
  - Analyzed creep behavior of FREEs and generated plots with C++ program

Projects

- **Reduce Reuse Recycle Robot** Ann Arbor, MI
  EECS 467 Course Project (GitHub: EECS-467-W20-RRRobot-Project/RRRobot) *Mar. 2020 – Apr. 2020*
  - Simulated UR10 robot arm with ROS and Gazebo that classifies and sorts items into trash and recycling
  - Employed convolutional neural network to classify images, depth camera point cloud coordinate transformations to determine grip position, and inverse kinematics to calculate joint positions

- **Autonomous Delivery of Supercritical CO_2** Canton, MI
  MECHENG 450 Course Project with Fusion Coolant Systems *Sep. 2019 – Dec. 2019*
  - Led team of 5 through entire design process for semester project: problem definition, concept generation and evaluation, final design prototyping and validation
  - Performed engineering analysis, technical report writing, and CAD in SolidWorks; created engineering drawings, design review presentations, and physical prototype of final design

Skills

- **Programming**: C++, C#, C, Python, Arduino, ROS, Java, Excel VBA, LaTeX, HTML, CSS
- **Computer Aided Design**: SolidWorks, CATIA
- **Simulation**: MATLAB, Simulink
- **Manufacturing**: University of Michigan Wilson Center Basic I & II, Mill Training
- **Languages**: English (first language), French (conversational), Tamil (conversational)