Sravan Balaji

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Education

- **University of Michigan - Ann Arbor** **Sep. 2016 - Dec. 2021**
  M.S. in Robotics - Ann Arbor, MI Jan. 2021 – Dec. 2021
  B.S.E. in Mechanical Engineering - Ann Arbor, MI Sep. 2016 – Dec. 2020
  B.S.E. in Computer Science - Ann Arbor, MI Sep. 2016 – Dec. 2020

Work Experience

- **MITRE** **May 2021 - Present**
  Associate Autonomous Systems Engineer - McLean, VA Jan. 2022 – Present
  Graduate Navigation Intern - Remote May 2021 – Aug. 2021
  - Designed and developed approach to identify implicit mitigation links between nodes in a directed acyclic graph for PNT Defense & Threat Library written in Python
  - Revamped and formalized software development process to improve visibility and organization of PNT Assurance project written in Julia
  - Placed 3rd in team-based machine learning intern hackathon; identified malicious URLs based on URL strings and information on age of domain; achieved 0.94 F1 score
  - Placed top 3 in intern AWS DeepRacer challenge; trained reinforcement learning model to control simulated autonomous vehicle around unseen race tracks

- **Rivian** **Jun. 2020 - Aug. 2020**
  ADAS Controls Intern - Remote Jun. 2020 – Aug. 2020
  - Supported creation of Model-in-Loop framework for production controls software components; tested 50 requirements, identified and resolved 7 issues
  - Integrated speed limit algorithm into production controls software for use with Simulink Coder C/C++ code generation; considerations made for embedded system processing limits and time delays
  - Modified MATLAB data processing scripts to work with new test logs; compared performance against requirements and simulation to determine controls parameters to tune

- **Hughes Network Systems** **May 2019 - Aug. 2019**
  Software Development Intern - San Diego, CA 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** **May 2017 - Dec. 2018**
  Business Technology Intern - Plymouth, MI May 2018 – Dec. 2018
  - Championed effort to remove BOM data inconsistencies; developed Excel macro to summarize mass and cost data, alert PMs of incorrect data; resulted in faster detection and resolution of issues
  - 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%

  Vehicle Integration Intern - Livonia, MI May 2017 – Aug. 2017
  - Developed a program in Java to summarize results of simulation; allowed users to modify inputs to see projected results of simulation to avoid additional testing and reduce costs

Skills

- **Programming**: C/C++, Python, MATLAB, Julia, JavaScript, C#, Java
- **Development**: GNU/Linux, Git, Docker, Visual Studio Code, GNU Emacs, Vim, Atom, Visual Studio
- **Libraries/Frameworks**: ROS, NumPy, OpenCV, PyTorch, Vue.js, Bootstrap, GTSAM
- **Computer Aided Design**: SolidWorks,CATIA
- **Languages**: English (first language), French (conversational), Tamil (conversational)