Roshin Kadanna Pally

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Summary

Senior Software Engineer with a proven track record of delivering highly impactful features of top quality.

* Expertise in designing and implementing simulation and visualization features for automated driving and signal processing fields

* A team player with excellent work ethic and interpersonal skills

* Expertise in leading a project and mentoring new hires and interns

* Experience working with cross-functional teams such as Usability, Technical Marketing, and Application Engineering to develop specifications

Experience

Senior Software Engineer
MathWorks

May 2016 - Present (4 years 7 months +)
Develop web-based visualization tools using C++, JavaScript, and MATLAB
* Development of driving scenario simulation tools in Automated Driving Toolbox
* https://www.mathworks.com/products/automated-driving.html#dss
Features Added: INS sensor integration; smooth, jerk-limited vehicle trajectories for simulation; Lidar point cloud generation; low-poly actor meshes; reverse motion in driving scenarios; road network data model for geographic maps such as HERE/OSM and OpenDRIVE; Driving Scenario Designer app; lanes ground truth specification, visualization, and detection; development of a Driving Scenario Reader block and Bird's-Eye Scope in Simulink
* Contributed towards the development of Logic Analyzer in Simulink
Visit http://www.mathworks.com/videos/logic-analyzer-overview-121719.html

Software Engineer
MathWorks

Dec 2010 - May 2016 (5 years 6 months)
Contributed to the development of the new Simulink Scope and a Unified Scopes infrastructure.
Visit http://www.mathworks.com/videos/new-interface-for-scopes-106836.html
* Worked with usability and visual design teams on the new Simulink Scope GUI style, font sizes, icons, and colors.
* Developed various features such as simulation playback controls, style dialog, and a new programmatic interface.
* Added support for assigning signals to displays, signal naming, sample times, enumerated data types, event-based signals, signal units, and data logging.
* Improved the performance of the Scope by converting the code to C++ and fixing memory leaks.
Made the code base more extensible for adding new features.

Signal Processing and Communications User Interfaces Intern
MathWorks

May 2010 - Dec 2010 (8 months)
* Migrated key graphical features of the MATLAB and Simulink products to the new MATLAB graphics system
* Provided basic graphical property editing capabilities in the Simulink Scope
* Improved performance of Simulink Signal and Scope Manager
* Contributed to port Signal and Scope Manager features to the new Simulink Editor
* Added internationalization (i18n) and localization (l10n) support for various GUIs
* Fixed numerous bugs in the infrastructure and improved usability of GUIs

Research Assistant
Virginia Tech
Jun 2007 - May 2010 (3 years)
I received a graduate research scholarship from the DSP Research Lab at Virginia Tech directed by Dr. Louis Beex. I worked on various projects in Signal Processing and Communications. The projects involved research, development, and testing of software to implement signal processing algorithms. Additionally, I helped setup the design project for the DSP & Filter Design course, graded the course projects, and taught one class of the Signals and Systems course.

Education

Virginia Tech
M.S., Electrical Engineering
2007 - 2009
Thesis: Implementation of Instantaneous Frequency Estimation based on Time-Varying AR Modeling

SUNY New Paltz
B.S., Electrical Engineering
2004 - 2006
Senior Design Project: A Physical Activity Monitoring System
* Created an Embedded System to capture gait activity
* Created Software in MATLAB to process captured data

Licenses & Certifications

Leadership is everyone's business - FULL EXTENSION, LLC

Skills

Matlab • C++ • JavaScript • Data Structures • Design Patterns • React.js • Node.js • MongoDB • Dojo • Python (Programming Language)

Honors & Awards

Outstanding Graduate Award - State University of New York at New Paltz
May 2006

National Dean's List 2004-2006