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
* Full stack application developer adept at handling various aspects of a challenging project
* Experience in talking to customers, understanding their pain points, and delivering solutions
* 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 2 months +)

■ Development of driving scenario simulation tools in Automated Driving Toolbox
Visit # https://www.mathworks.com/products/automated-driving.html
■ Develop web-based visualization tools using C++, JavaScript, and MATLAB

■ Development of a Scenario Reader block and Bird's-Eye Scope in Simulink
Visit # https://www.mathworks.com/help/driving/ug/test-open-loop-adas-algorithm-using-driving-scenario.html
■ The Driving Scenario Designer app and lanes ground truth specification and visualization
Visit # https://www.mathworks.com/videos/release-2018a-highlights-1521057523711.html
Visit # https://www.mathworks.com/videos/driving-scenario-designer-1529302116471.html

■ 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, Simulink report generator, performance advisor, 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. Improved the robustness of the Scope by numerous bug fixes. And, made the code base more extensible for adding new features.
■ Enhanced signal naming for legends and sample time behaviors.

Some of my other contributions are:
■ Development of a Java-based MATLAB System Object Editor.
Visit # http://www.mathworks.com/help/simulink/ug/insert-system-object-code-using-matlab-editor.html
■ MATLAB Compiler support for System Object Scopes.
■ Mentored a project to upgrade a MALTAB S-Function block to a C++ block.
■ Added support for Unicode in Scope Viewers and Floating Scope blocks. Refactored legacy C style code to use C++ and STL.

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
■ Investigated and documented data type support for Simulink Scope

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.

Engineering Intern

eMerj

Aug 2006 - Oct 2006 (3 months)

■ Implemented communication between a micro-controller & fingerprint reader evaluation board (RS-232), Serial EEPROM (I2C)
■ Wrote embedded code to perform capture enrolling and capture verification of fingerprint templates; individually documented the project; team work in integration to an existing device

Teaching Assistant

SUNY New Paltz

Aug 2005 - Dec 2005 (5 months)

Course: Computer Simulation Lab
■ Administered MATLAB workshops and lab sessions
■ Guided students in MATLAB graphical user interface development

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

Honors & Awards

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

May 2006

National Dean's List 2004-2006

Eta Kappa Nu Association

Dec 2005

Rashtrapati Scout Award (Presidents Badge) - President of India

Nov 1999

Skills

Matlab • C++ • JavaScript • Object Oriented Design • Signal Processing • User Interface Design • Testing • Software Development • User Experience (UX) • Simulink