Rob Kelly

About

Highly-skilled software developer with more than 8 years of experience delivering high-quality, high-reliability software solutions to challenging R&D problems.

Skills

Languages
Python • Java • C++ • C# • C • Ruby
Rust • Perl • Javascript • R • MATLAB

Tools
Git • TravisCI • Gitlab CI/CD
Docker • pandas • numpy • scipy
Jupyter • matplotlib • Cython
Airflow • Tomcat • TailwindCSS
OpenAPI • Spring • SpringBoot
Ruby on Rails • Flask • SQLAlchemy
MySQL • PostgreSQL • Snowflake
OpenCV • OpenGL • LaTeX

Other Experience
Agile • project management
Strongly proficient in Linux

Clearance
DOE Q Clearance, in-scope Tier 5 investigation July 2020 (inactive)

Education

B.Sc. in Computer Science
B.Sc. in Mathematics
New Mexico Institute of Mining and Technology
2011 — 2016 *Socorro, NM*

- 3.36 GPA, graduated with honors.
- Electives included theoretical & applied statistics, operations research, modeling, numerical linear algebra, cryptography, abstract algebra, databases, and neural networks.

Employment

Software Engineer (Contractor) *since Aug 2021*
Rural Sourcing, Inc. *Albuquerque, NM*

- Worked closely with clients to refine requirements and develop robust, reliable, maintainable software solutions.
- Supported several teams as a developer and SME in a wide range of tech stacks and practice areas, including data integrity validation using pandas, as well as full-stack web development in SpringBoot, Flask, and Ruby on Rails.

Software Engineer (Contractor) *Feb 2019 — Jan 2021*
Science Applications International Corporation *Albuquerque, NM*

- Worked with a small team at Sandia National Labs' Quantum Performance Lab developing and maintaining open-source software in Python for modeling and characterizing noisy quantum information processors.
- Implemented unit/regression tests and automated CI/CD to consistently deliver high-quality features.
- Identified bottlenecks and implemented optimizations in high-performance numerical analysis applications. Provided expert analysis on design of distributed Industrial IoT (IIoT) control systems and developed Sparkplug-B/MQTT distributed control solutions.

Software Engineer *Jun 2014 — Nov 2017*
Magdalena Ridge Observatory *Socorro, NM*

- Worked on a team developing control software for the MRO Interferometer (MROI) and the New Mexico Tech Extrasolar Spectroscopic Survey Instrument (NESSI).
- Developed, deployed, and integrated control software for optical imaging subsystems with MROI in-house SCADA network.
- Designed and managed development of the MROI Alignment Control System (ACS).
- Managed team DevOps with Gitlab RCS & CI/CD in a iterative test-driven development environment.

Research Assistant to Dr. Hamdy Soliman *Jan 2016 — May 2016*
NMT Dept. of Computer Science & Engineering *Socorro, NM*

- Graded course work, prepared lab curriculum, and instructed lab course for CSE 489: Introduction to Neural Networks Applications.
- Students developed solutions to real-world data clustering and classification tasks by applying neural network techniques using Weka, the MathWorks Neural Network Toolbox, and TensorFlow.

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