# Rob Kelly

## About

Highly skilled software development professional with more than 6 years of experience delivering high-quality, high-reliability software solutions to challenging R&D problems.

## Skills

### Clearance
Active Q Clearance, in-scope Tier 5 investigation Sept. 2019

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

### Tools
Git • TravisCI • Gitlab CI/CD • Docker
pandas • NumPy • Cython • OpenCV
SQLAlchemy • MySQL • PostgreSQL
Flask • OpenGL • Arena • LaTeX

### Other Experience
Agile • project management
Linux as a user, administrator, and DevOps engineer

## Education

### B.Sc. in Computer Science
### B.Sc. in Mathematics
*New Mexico Institute of Mining and Technology*

2011 — 2016                                  *Socorro, NM*

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

## Employment

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

- Worked with a small team at Sandia National Labs' Quantum Performance Lab developing and maintaining open-source software 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.

### Grader, Tutor, TA                                *Jan 2013 — May 2013*
### NMT Dept. of Computer Science & Engineering     *Socorro, NM*

- Graded course work, instructed labs on programming in C (CSE 113) and Python (CSE 107).
- Graded and tutored for a course on data structures and algorithm analysis (CSE 122).

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