DANIEL KROLOPP

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Education:

Purdue University — West Lafayette, IN

M.S. Computer Science	**GPA: 3.41	May 2020**
B.S. Computer Science, concentrations in systems programming & security	**GPA: 3.59	May 2019**

Industry Experience & Projects:

Sandia National Laboratories — Albuquerque, NM

Research & Development Intern   **May 2019 - Present**

- Leveraged machine learning and deep learning techniques to classify protocols of packets travelling on a network with validation accuracies exceeding 99%.
- Crafted an ensemble approach to classify or flag anomalous packets for automated inspection or manual review.
- Built a heuristics framework for training and optimizing binary- and multi-class packet classification neural networks.

MOBI Wireless Management — Indianapolis, IN

Software Development Intern   **May 2018 - August 2018**

- Collaborated with full-time software developers as part of a Scrum team to implement the year's largest new feature.
- Developed MOBI Workflow — a system that allows organizations to customize their mobile device management through a drag and drop web interface based on Business Process Model Notation.
- Implemented an internal Rails application to facilitate access to developer documentation through a wiki interface.

JARVIS — github.com/epaglier/Project-JARVIS/   **August 2017 - December 2017**

- Collaborated with three teammates to develop a personal voice assistant similar to Siri using a Raspberry Pi.
- Directed and coordinated team members to meet deadlines as set by the course professor.
- Developed a Python library used by other team members to interface with the Pi's GPS hat and serial bus.

Academic Experience:

Purdue University Systems Research Group — West Lafayette, IN

Graduate Research — DCnet Project   **January 2019 - Present**

- Collaborated to build and measure a DARPA-funded experimental data center architecture designed to optimize East/West network traffic.
- Leveraged the Ryu SDN controller to employ custom packet handling and flow rule installation.
- Developed a software module for facilitating changes to the data center configurations.

Purdue University Department of Computer Science — West Lafayette, IN

Graduate Teaching Assistant, CS 354 Operating Systems   **August 2019 - Present**

Undergraduate Teaching Assistant, CS 252 Systems Programming   **August 2018 - May 2019**

- Instructed students in building, debugging and understanding major components of an operating system kernel.
- Explained challenging systems-level concepts to second-year computer science students during lab sections.

Purdue University Residences — West Lafayette, IN

Resident Assistant, Harrison Hall   **August 2017 - May 2019**

- Cultivated a healthy and safe community atmosphere among residents to ease the transition to life in college.
- Facilitated policy enforcement throughout the residence hall.

Awards/Honors:

- Honor Roll and Semester Honors
- Purdue Presidential Scholarship (four-year) recipient
- Purdue Department of Computer Science Gene & Marqueritte Kim Endowment Scholarship

Extracurricular Involvement:

- Secretary of the Purdue Impact Theory (science outreach/education)
- Student Ambassador with Purdue College of Science Ambassadors

Programming Languages, Skills & Frameworks:

- C/C++, Python, Java, x86 & ARM Assembly, Ruby, Javascript, PHP
- Machine learning, deep learning, kernel programming, SDN, computer networking, RESTful API
- Scikit-learn, Keras, Ruby on Rails, AngularJS