Ryan Geary

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EXPERIENCE

Johns Hopkins University Applied Physics Laboratory - Laurel, MD (University Affiliated Research Center)   *June 2020-Present*
Associate Staff Software Engineer
- Develop and maintain a suite of 11 interdependent microservices conducting near real-time network analysis on up to 3000 packets per second using Kafka, Zookeeper, Elasticsearch, Linux, Java, Python, and Node
- Supervise and help develop Java, Python, and Typescript libraries for the above services to share functionality across the system
- Design and develop a Controller Area Network (CAN) simulation tool for hardware analysis using Rust, WebAssembly, and MySQL
- Design and develop a domain specific language (DSL) grammar and interpreter for real time configuration and processing in CAN simulation tool
- Ensure and promote software quality via unit tests, integration tests, linting, and static analysis, performed via GitLab CI pipelines
- Automate software builds and deployments through GitLab CI pipelines and Docker using Docker Compose
- Communicate technical design decisions and system knowledge through oral and written communication
- Manage time between 2 to 3 simultaneous independent projects

Contrast Security - Baltimore, MD (Forbes' "Next Billion-Dollar Startups 2019", $122 million raised by Series D)   *June 2019-August 2019*
Summer Associate Software Engineer
- Exercised Agile Scrum methodology in a team of 5, incl. daily standup, 2-week sprints, sprint planning, and retrospectives
- Developed a GitHub application to provide visibility into, and remediation of, vulnerable dependencies in open source repositories
- Integrated internal security intelligence platform and GitHub using Python, GraphQL, Webhooks, and AWS Lambda functions
- Implemented CI/CD to AWS using the Serverless framework through Bitbucket Pipelines
- Created Docker images to resolve Maven, Gradle, NPM, Pip, NuGet, and RubyGems dependencies through AWS Fargate

University of Delaware - Newark, DE   *January 2018-May 2019*
Research Assistant
- Developed motor controller logic and GUI for custom printer using MATLAB
- Conducted research in 3D printing pharmaceuticals using syringe dispensing and fused deposition modeling techniques

Commvault Systems - Tinton Falls, NJ (Bell Labs spin-out)   *Nov 2015-Aug 2016, Jun 2017-Aug 2017*
Development Intern
- Developed natural language search functionality for easy and effective data recall using C# and MongoDB
- Trained a natural language search model using API.AI (now Google's Dialogflow)
- Designed cloud-based data management interface for visual media using Django web framework

EDUCATION

University of Delaware   *August 2016-May 2020*
Honors Bachelor of Computer Engineering
- Minors: Computer Science, Cybersecurity
- GPA: 3.9
- Relevant coursework: Operating Systems, Compilers, Secure Software Design, Networks, Data Structures, Software Engineering, System Hardening & Protection, Computer Systems Engineering, Computer Systems Design, Signals and Systems

COMPUTING PROJECTS & ACCOMPLISHMENTS

- choose [github.com/theryangeary/choose]
  - Command line tool aiming to be a faster, more human-friendly alternative to 'cut'
  - Primary designer, developer, and maintainer of project with 875+ stars on GitHub
  - Profiled and improved performance using 'perf' and 'flamegraph' utilities
- tonic-raft [github.com/theryangeary/tonic-raft]
  - Rust library implementing the Raft consensus protocol for users to easily achieve high-availability in distributed services
  - Utilized gRPC and Protobufs for network remote procedure calls
- President of Linux Users Group at University of Delaware
  - Delivered educational talks about Linux, free and open source software and tools, and programming concepts
  - Promoted the use of Linux based operating systems in the campus community for educational and daily use
- Eagle Scout Award

TECHNICAL SKILLS

Programming Languages: Bash, C, Java, Python, MIPS Assembly, Rust, SQL

Tools: AWS Lambda & Fargate, Elasticsearch, GDB, Git, Gradle, gRPC, JSON Schemas, Kafka, Linux, Make, MongoDB, Protobufs, RESTful Services, Valgrind, VHDL, Vim

DevOps: Bitbucket, Gitlab, & Travis CI; Docker & Docker Compose; Test Driven Development; UNIX shell scripting