

David Gray

Product Security Engineer — Kubernetes, Azure & secure cloud systems

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— EXPERIENCE

Product Security Engineer · Boeing

Nov 2025 — Present

- Led the cloud migration of 3 software toolchain applications and delivered a live demo that directly contributed to securing the company's share of a \$90M contract award.
- Architected and deployed cloud infrastructure with Helm charts (configuration-as-code) and infrastructure-as-code, standardizing application deployments across Azure.
- Configured and operated an Istio service mesh for mutually authenticated service-to-service traffic inside Kubernetes.
- Designed and threat modeled a zero-trust continuous deployment pipeline for configuration-as-code and infrastructure-as-code delivery to Kubernetes clusters, with security review built into the release process.

Software Engineer · Boeing

Jun 2021 — Nov 2025

- Engineered a processor software stack from the ground up (kernel, task scheduler, communication protocols) in C and Ada for a globally distributed weapon system.
- Built a Go HTTPS server for integration testing that cut testing time by 10×.
- Created a portable system library for any OS or bare-metal target with C++, Docker, Bazel and GitLab CI, cutting porting work by 4×.
- Applied cryptography and anti-tamper design to RTOS software, and Linux depth to cloud build pipelines.
- Led the engineering effort on a cross-program missile interface application, improving real-time telemetry decoding and control (C#, WPF, XAML).
- Designed, ran and analyzed requirements-based tests for a formal qualification test event, using a six-degrees-of-freedom simulation and an experimental aircraft.
- Worked on the engineering behind multi-million dollar military contract wins for the weapon product lines.

Web Developer · Computational Learning Systems Lab, Missouri State

Aug 2020 — May 2021

- Maintained and updated the lab website and its research listings.
- Validated links to papers and project artifacts so citations actually resolved.

Undergraduate Researcher · Computational Learning Systems Lab, Missouri State

Jul 2020 — Aug 2020

- Built Python preprocessing and ML pipelines (pandas, scikit-learn, matplotlib) for neuroimaging data.
- Implemented dimensionality reduction, including t-SNE, and the analysis workflows around it.
- Produced figures and reports with the graduate researchers for the published paper.

Quality Assurance Intern · O'Reilly Auto Parts

Jun 2020 — Aug 2020

- Ran integration tests by querying cloud telemetry databases with SQL, and sped up the queries inherited from a legacy database.
- Reviewed, tested and approved test cases against production software; documented bugs in Jira and Confluence.

Co-founder & Full Stack Engineer · Gurulla

Jan 2020 — Dec 2020

- Built Flutter apps for iOS and Android on a Firebase backend for data and real-time messaging.
- Owned the architecture end to end, from the data model to the screens.

Computer Lab Assistant · Missouri State University

Sep 2019 — May 2021

- Resolved network, software and hardware issues for students, faculty and lab equipment.
- Wrote documentation so the same problem did not need solving twice.

EDUCATION

M.S. Computer Science — Data Science · University of Illinois Urbana-Champaign

2025 — May 2027

In progress

B.S. Computer Science · Missouri State University

2017 — May 2021

GPA 3.56 · Dean's List 2019, 2020, 2021

SKILLS

Security & cloud	Threat modeling · Zero-trust delivery · Kubernetes · Istio · Helm · Terraform · Azure · AWS
Systems	C · C++ · Ada · Rust · Go · RTOS & bare metal · Linux · Cryptography & anti-tamper
AI / ML	PyTorch · TensorFlow · Keras · Transformers · scikit-learn · pandas · Computer vision · Reinforcement learning
Product	Python · TypeScript · Vue · C# · Dart / Flutter · Django · SQL
Practice	Bazel · Docker · GitLab CI · Jenkins · Git · Bash

PUBLICATIONS

B. Bagby, D. Gray, R. Hughes, Z. Langford, R. Stonner. "Simplifying Sign Language Detection for Smart Home Devices using Google MediaPipe." Missouri State University, 2021.

D. Gray et al. "Effects of t-SNE Dimensionality Reduction on Traumatic Brain Injury MRI Data." Computational Learning Systems Lab, 2020.

LEADERSHIP

Vice President · Enactus, Missouri State. Ran information between the executive board and members, and advised on decisions affecting the chapter.

Sep 2019 — May 2021