

Christopher J. McGee

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I enjoy solving technology-related problems and building flexible, maintainable infrastructure with a preference for open source tooling.

My goal is to enable software teams, both as a DevOps engineer serving their infrastructural needs and as a manager tackling communication challenges. I cultivate teams that can trust each other and keep processes as agile and effective as possible.

Professional Experience

Senior Engineering Manager | DUST Identity

September 2023 - Present

- Led the core services and infrastructure team, managing both Software Engineering & DevOps
- Coordinated third party audits, keeping accurate documentation of system architectures and inventory
- Managed IT contractors and maintained security and accessibility of internal networking hardware and servers
- Interfaced with executive leadership to translate business goals into developer objectives and contextualize the long-term DevOps road map

Senior Devops Engineer | DUST Identity

June 2021 – September 2023

- Automated feature deployments for AWS stacks to unblock QA and UX during migration to Kubernetes
- Translated legacy architecture from AWS ECS into Kubernetes
- Adapted containerized architecture to work on an air gapped alternative to DUST Identity's cloud offering
- Increased testing and deployment speeds with differential deployments, caching, and test parallelization
- Migrated all access control from password and key auth to SSO across databases, Kubernetes, and AWS
- Built tooling to securely discover and connect to databases in development and production automatically
- Executed production deployments, smoke testing, communication, and troubleshooting
- Performed customer demos and directly interfaced with both technical managers and users
- Automated smoke testing of web applications with Selenium and Pytest
- Diagnosed resource utilization issues in Postgres databases to improve ORM efficiency

Web Programmer Analyst | NRG

September 2019 – June 2021

- Managed CI/CD pipeline across AWS and Azure clouds
- Authored infrastructure-as-code in Ansible for deploying and managing AWS resources
- Implemented a data-driven product engine using Django, Postgres, AWS Elastic Beanstalk, and AWS SQS
- Migrated legacy databases to AWS S3 for query with AWS Athena to lower costs and preserve auditability
- Enhanced local Docker images to run servers, database migrations, linting and unit tests
- Implemented a standard caching structure for daily pricing runs to avoid unnecessary API calls
- Standardized onboarding; capturing Docker, WSL, Git, Jira, and Python team best practices

Design Engineer | Hardwire LLC

September 2018 – September 2019

- Built an internal shipping web app to track orders using Python, Flask, and SQL Server
- Designed and prototyped a hydraulic and pneumatic press production line for the production of body armor
- Designed and built fatigue test machines
- Developed software to automate and integrate barcode generation and scanning into RFID printer workflows
- Employed spectrometers and wrote Python-based computer vision tools to perform quality control on ballistic windows
- Helped design production lines to take R&D products from prototype to mass production

Explosive Ordnance Disposal Robotacist | IRES Cambodia**June 2018 – August 2018**

- Worked on location in Phnom Penh, Cambodia with Golden West Humanitarian Foundation
- Implemented PID control for nodding LIDAR systems on EOD robots
- Prototyped sun tracking solar panel array using OpenCV Python on Raspberry Pi, controlled panels via Arduino and linear actuator receiving inputs from Matlab/Simulink inverse kinematic models
- Taught microcontroller fundamentals and construction of sensors from basic electrical components to enable Cambodian grad students to operate efficiently and overcome supply chain constraints

Structural Engineering Intern | Johns Hopkins Applied Physics Lab**June 2017 – April 2018**

- Supported the structural and thermal efforts for the Solar Probe and Europa programs
- Prototyped thermal vacuum compatible infrared and visible light camera using Raspberry Pi
- Led mechanical assembly and testing of measurement instruments for internal research projects

Thermal Engineering Intern | NASA**June 2016 – August 2016**

- Optimized the Parker Solar Probe's solar array MATLAB thermal model, decreasing runtime by a factor of 200
- Designed and executed tests to qualify, record, and present thermostat performance, saving \$5,000 by allowing the reuse of equipment that lacked documentation

Education

Villanova University, Villanova, PA**2014 – 2018**

Bachelor of Science in Mechanical Engineering – 3.8/4.0 GPA

Skills & Qualifications

Languages: Python, Bash, SQL, TypeScript, Rust, C**Databases:** Postgres, MySQL**Frameworks:** Django, Flask, Fast API**Cloud:** AWS, Azure**Containers:** Kubernetes, k3s, Docker, Podman**Testing:** Pytest, Playwright**Version Control:** Git, Github**Documentation and Content:** Hugo, Jekyll, MkDocs, Markdown, Wordpress**CI/CD:** Github Actions, Argo CD, AWS Codebuild, Azure Pipelines, Jenkins, Circle CI, Ansible**Security:** SeLinux, PAM, Smart Card**Observability:** Prometheus, Loki, OpenTelemetry, Grafana