

TYLER PERKINS

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WORK EXPERIENCE

Etactics, Hudson, Ohio

May 2022

Senior Software Developer

- Spearheaded the complete rewrite of our core application in Springboot, delivering a product with feature parity, increased maintainability, increased performance, and lower resource requirements
- Designed and implemented a robust CQRS architecture leveraging Springboot and Spring-Modulith, decreasing page load time by 50 times
- Implemented a SAML2/OIDC identity broker for legacy applications
- Implemented a Fine Grained Authorization component for our application, providing low latency responses and secure authorization checks with record level resolution
- Guide junior developers in mastering the new tech stack and core development skills with pair programming, code reviews, and team design discussions
- Maintain legacy application, providing quality of life updates and security fixes as required

Kent State University, Kent, Ohio

January 2020 - August 2020

Software Developer

- Analyzed client needs for an internal attendance application, and developed a web application in 3 months leveraging ASP.NET Core to meet client requirements, delivering an application still in use with two thousand concurrent users.

EDUCATION

Georgia Institute of Technology, Atlanta, Georgia

January 2024

Masters of Science : Major Computer Science

Specializing in Computing Systems

Selected Coursework: Distributed Systems, Computer Networking, Machine Learning for Trading,

Kent State University, Kent, Ohio

August 2019 - May 2022

Bachelor of Science : Major Computer Science

Overall GPA: 3.5

Specialized in Embedded Systems and Information Security

Selected Coursework: Operating Systems, Design and Analysis of Algorithms, Systems Programming

TECHNICAL STRENGTHS

Technologies

MySQL, Java, Springboot, Vue/Nuxt, Linux, git, Docker, Kubernetes, Terraform AWS tooling (ECS, EC2, RDS)

Languages

C, C++, C#, Java, JavaScript, PHP, Python, Bash, Go, x86 Assembly, Verilog HDL

Miscellaneous Tools/Technologies

IoT Developemnt (ESP32, ATmega328P, RP2040), UML, SysML, Gitlab and Drone CI/CD, Ham Radio (Technician Class, KE8TIZ), Software Defined Radio (RTL-SDR, HackRF), 3D-printing, FreeCAD, EasyEDA

PROJECTS

Homelab

March 2020

A self hosted homelab cluster running on a combination of retired enterprise and commodity hardware. Striving to replicate an enterprise data center at home. Implemented a self hosted S3, AWS lambda-like, and Kubernetes cluster running over 70 containers with two availability zones.

Multi-Paxos with Stable Leaders

Feb 2024 - March 2024

Implemented multi-paxos with a stable leader election protocol. Resilient to a minority node failure. Includes garbage collection for the paxos log, and resilient to network failures and network partitions. Provides exactly once command execution guarantees, and proposal batching to reduce consensus latency.

Deaf Transcription Application

March 2021

Implemented a near real-time transcription application utilizing OpenAI's Whisper for deaf family members. Leverages Telnyx for multi member transcription utilizing phone calls. Highly available on self hosted hardware and utilized daily by several family members.