Simon Spivey

An engineer fascinated with problems related to scaling.

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Technical

Main Interests

Software Architecture, Distributed Systems, Optimization, Scaling, Load Balancing, Network Infrastructure

Languages

Lua, C, C#, JS / TS, Python, PS

Databases

MongoDB, SQL, Elasticsearch

OS

Linux, Windows

Technologies

Docker, Git, SSH, HyperV, Azure

Ventures

Stealth Startup
Janurary 2024 - Present

Co-founded with a current practicing neurosurgeon, We identified a need for a tool in the neuroscience field of research.

Languages

French

Japanese

CMU

Graduate Courses

- 18-847A High Performance Computing
- 18-847B Data Center Computing
- 18-845 Internet Services & OS
- 18-749 Distributed Systems
- 18-739 Offensive Cybersecurity
- 18-649 Distributed Embedded Systems
- 18-648 Real-time Embedded Systems

Professional Experience

Adatafy, Solutions Consultant — **Remote, September 2023 - Present**

CMMS connector system

- Developed a synchronization system that in real-time syncs work order, location, and event data between multiple systems.

Localized GUI Debugger

- Developed a debugger that enables developers to look at call stacks, variables, and breakpoints in real-time distributed lua code.

Internal Product Website

- Developed a website that allows users to quickly search, input, and research products and tools across the Emerson impact-partner network.

Novaspect, IoT Engineer — **Schaumburg, July 2021 - September 2023**

Air Compressor Validation System

- Engineered a PLC, SCADA, and BaaS systems to automate the testing process of air compressors from assembly line to specification sheet.

Pharmaceutical automated batch distributed system

- Engineered a system that automates master batch production and generates KPIs and BI data for each batch.

Nuclear Facility Distributed System Architecture

- Designed a system that handles 100's of Petabytes of data on a air-gapped cloud-esque ecosystem

Version Control reporting tool

- Designed a reporting engine that generates a yearly report that aggregates 100k+ pieces of VC data from DeltaV™ to satisfy pharmaceutical quality control regulations.

Education

Carnegie Mellon University — **August 2023 - [December 2024]**
Electrical & Computer Engineering — M.S.
4.0 / 4.0

Olivet Nazarene University — **August 2017 - May 2021**
Software Engineering, Electrical & Computer Engineering — B.S.E.
3.74 / 4.0

Course Projects

Fault-Tolerant Distributed System

Lead a team of 4 engineers to build a fault-tolerant distributed system. This system spanned ~8 microservices (~20 with replication) and could handle (n-1) crashes at any point within the system without loss of data or service.

Cloud applications for Rural Communities

Engineered a cloud service for rural communities that is focused on fault tolerance, availability, and limited bandwidth. This research is still ongoing.

See more on my website

https://sspivey.com/#project