Joe Weller

Los Angeles, CA

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Work Experience

Kohl's
Software Engineer

Remote
May 2022 - Present

- Built and deployed multiple Greenfield services for distribution centers using Java, Kafka, GraphQL, GCP Buckets, MongoDB, Db2 and Airflow
- Led development of Android WebView app that provided native Bluetooth printing and Zebra scanning to multiple PWAs on 100+ devices
- Drove DC label printing modernization effort by developing a service that created distribution labels based on internal manufacturer data
- Investigated necessity of Kohl's inventory exposure engine, leading to the decision to rebuild it from scratch, saving $600k/yr in vendor costs
- Oversaw a team of 3 to create a performance testing suite for Kohl's global inventory system. The suite utilized Grafana's k6 framework, was containerized, capable of producing 30,000+ RPS across multiple endpoints, and could be effortlessly ran through a Gitlab pipeline
- Increased the average response time of customer-facing inventory availability endpoints by 20% through concatenating redundant DB calls
- Migrated code used by customers to reserve inventory items in the system post-purchase from a monolithic app to its own microservice

Rockwell Automation
Data Analytics Intern

Milwaukee, WI
Jun 2021 - Aug 2021

- Architected, developed MVP, and applied for a patent for a software licensing microservice using ERC20 tokens, React, Flask, Solidity, InfluxDB
- Created mock-ups and developed the front-end of a telemetry pipeline microservice using Figma and React

MSI Data
Software Development Intern

Milwaukee, WI
Nov 2019 - May 2021

- Built a service that displays live location updates of dispatched service technicians to customers using React and AWS S3
- Maintained and added new features to various SaaS products using TypeScript, SQL Server, and .NET

Projects

BCI Bin
November 2023 - Present

- A hub for public Brain-Computer-Interface resources to lower the bar of entry for exploring BCIs due to the prohibitive cost of current hardware
- Current stack includes Typescript, NextJS w/ server actions, Supabase w/ Prisma, AWS S3, NextAuth, Tailwind, Shadcn-UI, ThreeJS and GSAP

Bias Compass Bot
March 2023 - May 2023

- A Telegram Bot to detect political bias and opinion-based journalism practices in news articles using LangChain and OpenAI's GPT-4

Collabify
Nov 2022 - Jan 2023

- A web app that allows Spotify users discover, visualize in a 3d graph, and interact with all songs that their favorite artists have collaborated on
- The backend concurrently discovered 'collabs' using goroutines and instantaneously streamed them to the frontend using websockets

Competitive Robotics Autonomous Strategy Platform
Sep 2021 - May 2022

- Trained and optimized the YOLOv5 object identification model on a self-acquired dataset of 500+ images and integrated it on a Jetson Nano
- Transformed game object vectors between multiple reference frames of a robot using ROS and TF2

Lymphocyte Classification in Hyperspectral Images
Nov 2021 - Apr 2022

- Researched identification of lymphocytes in FTIR biopsy core images of cancerous ovarian tissue samples through the use of ML and DL methods

Glomerular Injury Assessment Research
Mar 2021 - May 2021

- Collaborated with the Medical College of Wisconsin to co-author a research paper that detailed the creation of a computer vision pipeline that identified and scored glomerular injuries to increase medical laboratory workflow efficiency and reduce human error of renal pathologists

Blockchain Development Curriculum
Nov 2021 - Feb 2022

- Constructed an upper-level elective course on blockchain and smart contract development and presented insights at a regional conference

Education

Milwaukee School of Engineering
B.S. Computer Science

Milwaukee, WI
Sept 2018 - May 2022

- Graduated with a cumulative GPA of 3.84
- Worked as an academic tutor where I led individual and group tutoring sessions for Software Development, Data Structures, and Calculus
- **Organizations:** Raider Robotics (cofounder & web team leader), MSOE AI Club, Society of Software Engineers, MSOE Chess Club (cofounder)

Achievements

Year	Award	Organization
2022	**1st Place**, Rosie Supercomputer Super Challenge	*Nvidia & MSOE*
2021	**1st Place**, IT Innovation Hackathon	*Rockwell Automation*
2021	**Exellence Award**, VEXU World Championship	*REC Foundation*
2020	**1st Place**, Chess AI Hackathon	*MSOE AI Club*
2020	**Finalist**, 24 to Code Hackathon	*Rockwell Automation*