Joseph Laurent Krueger

Software Engineer

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EDUCATION

University of Washington (Seattle campus) September 2022 — December 2024
Bachelor of Science in Computer Science, Minor in Business GPA: 3.70/4.0

EXPERIENCE

Clean Power Research, Software Engineer Intern June 2024 — October 2024 | Bellevue, WA
- Designed a scalable, fault-tolerant **.NET** API service that inserts charts into PDFs from interface-defined endpoints
- Extended existing orchestration infrastructure with **AWS Lambda** to connect with a containerized **Node.JS** app
- Implemented an **Azure DevOps** CI/CD pipeline for automated deployment in dev and test environments
- Designed new charts generated for on-demand reports in under 5 seconds used by HVAC contractors across the country
- Wrote technical documentation and automated tests for debugging and monitoring to a production-ready coding standard

Clearvote, Startup Co-founder August 2023 — Present | Seattle, WA
- Founded a student-run non-profit developing a cross-functional, open-source **Next.js** application deployed through AWS
- Deployed a throttled, high availability **RESTful API** supporting over **over 3000 users** during a critical usage period
- Setup a **DynamoDB** NoSQL database leveraging web-scraped candidate data enriched with finetuned GPT-4o metrics and state geodata boundaries to provide localized election information across the state of Washington
- Leading prioritization of dependency management, user research, security, cloud architecture and code quality
- Coordinated a marketing campaign with targeted branding, in-person promotions, and social media partnerships

MCG Health, Software Engineering Internship June 2023 — September 2023 | Seattle, WA
- Worked on the CareWebQI Team to overhaul an In-patient diagnostic and perscritption tool used by **2,800 hospitals**
- Migrated from a deprecated version of **Angular** to work with a **.NET Core** backend
- Added auto-completion and code lookup support for **70,000 medical care guideline codes**
- Applied agile project management principles in cross-team sprint planning sessions with **Confluence** and **JIRA**

The University of Washington, Full Time Teaching Assistant January 2023 — June 2023 | Seattle, WA
- Led class sessions, office hours, and individual tutoring for a computer architecture course and a introductory Java course

PROJECTS

Financial Portfolio Rebalancer, Full Stack Application April 2024 — Present
- *Auto Trader*: Developed a **C++** Technical Analysis app optimized for market-wide dividends. Backtests on historical market data for **sub-5-second stock speculations** and an EMA algorithm to compare against time series prediction models
- *Time Series Forecast*: Designing a **Kubernetes** cluster integrated with **Prometheus** and **Grafana** to ingest preprocessed stock data and train regression models (with **PyTorch**) for stock price time series forecasting

ProtoQA Submission, NLP class research project under Prof. Yejin Choi January 2023 — March 2023
- Developed a multi-model pipeline using Zephyr-7b-beta that outperformed GPT-2 baselines on ProtoQA's commonsense reasoning benchmark through prompt engineering
- Optimized model performance with WordNet similarity matching and 30-token generation, without the need for fine-tuning

DubHacks Hackathon, illustrAItor — Winner October 2022
- Winner from 455 participants building a Flask app that makes picture books out of novels with AI generated images

SKILLS

Languages:	Java, TypeScript, Python, C#, Dart, C++, C, Go
Frameworks:	Flutter (iOS and Android development), .NET, Flask, React, Next.js, Vue, AngularJS
DevOps:	CI/CD pipelines (Azure DevOps), Shell scripting (PowerShell, Bash), Linux/Unix administration
Cloud Infrastructure:	Docker, Kubernetes, AWS (RDB, Lambda, DynamoDB, EC2, S3, Amplify), Azure, IaC (AWS CDK)
NLP:	Auto-regressive and Sequence-to-sequence transformers, Large Language Models (LLMs)