

Prajwal Narayanaswamy Software Developer

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SUMMARY

Software Developer with 2+ years of experience designing, building, and deploying **cloud-native web applications**, **Generative AI/LLM solutions**, and **ETL data pipelines**. Proficient in **Python**, **FastAPI**, **React**, **TypeScript**, **SQL**, and **Microsoft Azure**, with experience in **Azure OpenAI**, **RAG**, **semantic search**, **REST API** design, **Docker**, **CI/CD**, **automated testing**, **API security**, and **WCAG accessibility** across the full **SDLC**.

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, C++, SQL, HTML, CSS

Frameworks & Libraries: FastAPI, React 19, Vite, Tailwind CSS, Recharts, Node.js, Django Channels, Pandas, NumPy, Selenium

AI/ML & LLMs: Azure OpenAI, GPT-4, RAG, prompt engineering, Sentence-Transformers, embeddings, semantic search, scikit-learn, NLP

Cloud & DevOps: Azure (App Service, Container Apps, Front Door, Entra ID), GCP, Docker, Kubernetes, GitHub Actions, Azure DevOps, Linux

Data & ETL: Informatica PowerCenter, Oracle, SQL Server, MySQL, SQLite, data warehousing, ETL tuning, data preprocessing, data visualization

Testing & Security: pytest, Playwright, axe-core, unit/integration/end-to-end testing, regression testing, WCAG 2.1 AA, authentication

Core Competencies: Web Development, REST APIs, Async Processing, Caching, Web Scraping, Performance Tuning, Debugging

PROFESSIONAL EXPERIENCE

Web Developer, Microsoft – World’s Edge (via Experis)

Sep 2025 – Sep 2026 | USA

World’s Edge Price Tool – Regional Game-Pricing Intelligence Platform

- Built and deployed an end-to-end **pricing-intelligence platform** (**Python**, **FastAPI**, **React 19 + TypeScript**) that pulls game prices from **Xbox**, **Steam** and **PlayStation** across **92 markets and 47 currencies**, normalized to tax-free USD and benchmarked against US pricing, with **Excel reporting**.
- Engineered resilient multi-store **web scrapers** (Xbox Display Catalog API, Steam API, **concurrent** parsing of 68 PlayStation locales) with **exponential back-off** and a **Selenium** fallback, run by an **asynchronous job queue** and background worker with **rate limiting**.
- Deployed on **Azure App Service** behind **Azure Front Door (WAF)** with **Microsoft Entra ID** sign-in; authored **Bicep infrastructure-as-code** for Azure Container Apps and automated **CI/CD** pipelines in **GitHub Actions** and **Azure DevOps**.
- Remediated a reported **production security vulnerability** by enforcing fail-closed **Entra ID/API-key authentication** on every endpoint with a **48-case regression suite**; achieved **WCAG 2.1 AA** compliance with **Playwright + axe-core** tests across 6 app states and 5 screen sizes.

World’s Edge Review Tool – AI-Powered Steam Review Analytics Platform

- Migrated a single-user Windows desktop tool into a multi-user **web application** (**FastAPI**, **React 19 + TypeScript**, **Tailwind CSS**, **Recharts**) with **25 REST endpoints**, analyzing **100,000+ player reviews** in 29 languages; adopted by teams beyond the studio.
- Built **multilingual semantic search** with **Sentence-Transformers embeddings** and a content-addressed **vector store** that encodes only new or changed text; replaced ~227K per-pair calculations with a single **vectorized matrix operation**.
- Designed automated **insight detection** (sentiment drops by language, negative-topic spikes) and hybrid **topic discovery** combining semantic matching, **MiniBatchKMeans clustering** and **Azure OpenAI** cluster labeling.
- Integrated **Azure OpenAI (LLM)** for grounded **RAG-style Q&A**, bilingual reply drafting and theme analysis with **prompt-injection safeguards**; shipped via **Docker** CI/CD with **216 automated tests (pytest)** and **single-flight caching** that halved cold-start work.

Instructional Student Assistant, California State University, Chico

Feb 2024 – Oct 2024 | Chico, CA

- Conducted **data collection, analysis, and research** for faculty, applying **machine learning** and **statistical methods** for academic studies.
- Designed, implemented, and optimized **data preprocessing pipelines** in **Python (Pandas, NumPy)** for data cleaning, normalization, and transformation, improving dataset quality and **reproducibility** of downstream analysis.
- Built **data visualizations** to communicate trends and results to faculty, turning raw research data into clear, actionable insights.

Programmer Analyst Trainee, Cognizant Technology Solutions

Nov 2021 – Jul 2022 | Bengaluru, India

- Developed complex **ETL workflows** in **Informatica PowerCenter** loading large datasets from heterogeneous sources into **data warehouses**.
- Optimized ETL performance with **session partitioning**, **pushdown optimization**, and **parallel processing**, significantly reducing data load times.
- Integrated data from **flat files**, **relational databases (Oracle, SQL Server)**, and **mainframe systems** into centralized repositories, applying **SQL** transformations, validation, and cleansing rules to ensure **data quality**.
- Performed **root cause analysis** of ETL failures, resolving data discrepancies and performance bottlenecks via log analysis and **SQL tuning**.
- Collaborated with **data architects, business analysts, and QA teams** to gather requirements and deliver end-to-end **data integration** solutions.

EDUCATION

MS in Computer Science, California State University, Chico

Aug 2023 – Aug 2025 | Chico, CA

PROJECTS

- Accessible Code Narrator (VS Code Extension):** AI code-narration tool for visually impaired developers using **TypeScript (Node.js)**, **GPT-4**, and **ElevenLabs API** (95% code-to-speech accuracy).
- Multiplayer Chess Platform (Cloud-Native):** real-time game with **Django Channels** and **WebSockets** (<100ms latency, 500+ concurrent users) on **GCP Kubernetes** with **99.9% uptime**.

ACHIEVEMENTS & CERTIFICATIONS

- 3rd Prize** - NASA Ames Space Settlement Design Contest; **Student Achievement Award** - International Space Development Conference.
- Semifinalist** - DST & Texas Instruments India Innovation Challenge (2019).
- Google Cybersecurity Professional** (Coursera) [\[LINK\]](#) | **Python Data Structures**, UMich (Coursera) [\[LINK\]](#) | **IT Project Mgmt.** [\[LINK\]](#)