

PRESTON PERCIVAL

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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY, College of Computing, Atlanta, GA **December 2027 (Expected)**
Master of Science in Computer Science, Specialization in Machine Learning

- GPA: 4.0

THE UNIVERSITY OF TEXAS AT AUSTIN, McCombs School of Business, Austin, TX **May 2022**
Master of Business Administration

- Graduated with Honors and Dean's Award for Academic Excellence; GPA: 3.87; GMAT: 700

TEXAS A&M UNIVERSITY, Dwight Look College of Engineering, College Station, TX **May 2018**
Bachelor of Science in Computer Engineering (CEEN) with a minor in Mathematics

EXPERIENCE

TENASKA, Las Colinas, TX **June 2024 – Present**

Software Architect

Software Architect and Product Owner for PowerTools Platform (PTP) - enterprise object-modeling platform enabling Business-Driven Devopment and processing 30+ billion daily calculations for critical business and trading decisions, while driving organizational transformation initiatives.

- Architected SaaS-ready multi-tenant authorization system, migrating from Active Directory to Keycloak with unlimited organizational hierarchy support and modernizing authentication from WCF to .NET 9 gRPC, enabling market expansion and new revenue streams.
- Developed high-frequency trading system utilizing sub-millisecond precision optimization, advanced statistical analysis, and low level TCP optimizations to secure transmission rights worth tens of millions annually with 100% auction win.
- Led Kubernetes migration of 100+ services from legacy Windows Server to cloud-native infrastructure, delivering millions in annual cost savings and 99.9% uptime SLA while establishing cross-geographic team onboarding programs.
- Orchestrated company-wide AI hackathon engaging 100+ developers resulting in multiple greenlit AI projects advancing to implementation and establishing organizational framework for AI adoption across engineering teams.
- Created AI-powered migration tools and infrastructure automating 80% of schema transitions, saving 100s of user hours, and architected Model Context Protocol (MCP) servers enabling AI integration across PowerTools Platform suite.
- Led Redis clustering migration and performance engineering transitioning from traditional caching to high-availability Redis clusters, resolving memory issues preventing trading system failures, fixing TCP connection tracking problems affecting thousands of connections, and achieving 3x cache performance improvement with 60% latency reduction.
- Established structured hiring framework with objective criteria and technical assessment matrices, reducing time-to-hire across the organization and improving hiring outcomes by raising the technical bar.

MICROSOFT CORPORATION, Las Colinas, TX **September 2022 – June 2024**

Software Engineer II (L62), OneDrive and SharePoint (2024)

Software Engineer II (L61), OneDrive and SharePoint (2022 – 2023)

Enhanced performance, implemented features, and resolved critical bugs for SharePoint Content Store platform serving 200M monthly active users. Delivered SQL, managed code, and native code optimizations that significantly improved system reliability and user experience.

- Optimized SharePoint site permission management process, reducing runtime from 13 seconds to 8 milliseconds for sites with 100K users (99.9% improvement).
- Implemented paging in several widely used APIs to reduce SQL performance issues and increase reliability.
- Enhanced SharePoint group retrieval performance through stored procedure optimization and strategic caching, achieving 84% reduction in SQL reads, 92% CPU improvement, and 98% runtime decrease.
- Created integration test framework to provide coverage for audit and query code paths. The framework is widely used and has over 100+ individual test cases; Expanded test coverage with targeted unit and integration tests, preventing production regressions in legacy codebase.
- Improved performance of ad hoc queries reducing SQL reads by 91%, CPU by 95%, and overall runtime by 98%.
- Led development of an internal Microsoft Teams chatbot powered by LLMs, trained on team wikis, troubleshooting resources, chat messages, and emails. Built custom scraper to extract Teams messages due to API limitations. Evaluated

Azure OpenAI Studios for fine-tuning and document embedding before selecting open-source Vicuna-13B model for cost efficiency. Fine-tuned model using RTX 4090 with LangChain for document embedding and vector storage. Delivered production chatbot that improved team troubleshooting and onboarding, resulting in measurable productivity gains.

- Onboarded multiple new employees to our team minimizing the amount of time before they could create impact in the organization. Mentored new college graduate employees to help them learn about the industry and different technologies. Re-onboarded struggling employees resulting in high ratings on their next performance reviews.

AMAZON WEB SERVICES, INC., Dallas, TX

September 2021 – August 2022

System Development Engineer, AWS Professional Services

- Architected and developed scalable multiplayer trivia application with live streaming capabilities using AWS serverless stack (React, TypeScript, Python, NoSQL). Successfully supported 100K+ concurrent users in real-time gaming sessions.
- Led legacy application modernization project as a software consultant for the Department of Veterans Affairs, migrating Java monolith to cloud-native Node.js architecture. Collaborated directly with stakeholders to define requirements and delivered solution achieving 50% cloud cost reduction. Refactored codebase with reusable components and eliminated technical debt, reducing code size by 50% while improving performance and user experience.

TENASKA POWER SERVICES CO., Las Colinas, TX

May 2018 – September 2021

Software Engineer (2019 – 2021)

System Analyst (Software Engineer) (2018 – 2019)

- Designed 25+ data integration processes, services, and applications connecting 10+ major North American energy markets to proprietary calculation engine and data warehouse.
- Developed universal data integration processor supporting 200+ file formats using established design patterns, improving code reusability and saving 400+ hours annually while increasing processing performance by 500%.
- Architected cloud and container deployment/runtime environments in both AWS and Azure making services Highly Available and saving 100's of hours a year by reducing time spent on maintenance.
- Mentored and trained colleagues over a series of different subjects such as CI/CD, Docker, and .NET Core; documented policies and hosted presentations to accelerate new technology adoption rate.
- Developed frontends and backends for pages on custom web applications written in Vue.js, TypeScript, and C#, allowing users to view, manipulate, and submit data to/from major energy markets.
- Coordinated and organized efforts to consolidate and upgrade old code, enhancing performance and reliability by upgrading to modern technologies in addition to reducing maintenance across 100+ projects (100's of hours a year).
- Created reliable, redundant, and distributed services to submit to markets with uptime increased to 99.9%+ enabling users to meet market deadlines and preventing financial penalties.
- Initiated project converting department deployment methodologies to CI/CD with integrated unit testing using Azure DevOps; architected solution and created 50+ pipelines eliminating 100's of developer hours annually.

VOLUNTEERING

MICROSOFT TEALS, Dallas, Texas

June 2023 – June 2024

Co-Teacher

- Co-taught Introduction to Python to underserved high school students at School of Business and Management, Townview Center (Dallas ISD), planning lessons and developing curriculum for 2 hours weekly.
- Supported Microsoft's TEALS program mission to build sustainable CS education in schools serving students excluded from computer science due to race, gender, or geography.

ADDITIONAL

- **Backend & Platform Development:** C#, ASP.NET, gRPC, PowerShell, Node.js, Python, Java, C++, SQL Server, Redis, NoSQL, PostgreSQL, Visual Studio IDE, Unit Testing
- **Cloud-Native and DevOps:** Kubernetes, Docker, Helm, Flux, GitOps, GitHub Actions, AWS, Azure, Azure DevOps, Bash Serverless, Linux, Git, Prometheus, Grafana, Loki, AlertManager, Cilium, Ceph, Nginx, Keycloak, ActiveMQ, RabbitMQ
- **Frontend:** JavaScript, TypeScript, React, Vue.js, HTML, CSS, JSON, WPF, XAML
- **AI:** Microsoft Semantic Kernel, Model Context Protocol (MCP), RAG, Prompt Engineering, LangChain
- **Memberships:** McCombs Investment Club – pitched prospective stock purchases for long-equity portfolio
- **Certifications and Clearances:** AWS Certified Solutions Architect Associate, HSPD-12 PIV Card
- **Work Eligibility:** Eligible to work in the United States with no restrictions.