MINH DUY TRUONG
Software Engineer

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SUMMARY

Full-stack Engineer, architecting applications with deep ML understanding. Design intelligent systems with C#, ASP.NET Core, Blazor, and .NET Aspire; integrate ML insights to optimize user experience. Deploy production-grade applications on Azure with CI/CD pipelines, database optimization, and architectural rigor – bridging software excellence with data-driven decision making.

EDUCATION

Western Governors University   Salt Lake City, UT
- **Master of Science in Computer Science | AI and Machine Learning**   Expected Oct 2026
    Focus: Deep Learning, Natural Language Processing (NLP), Advanced AI, Computer Architecture, Applied Algorithms
- **Bachelor of Science in Data Analytics**
    Focus: Big Data, Machine Learning DevOps (MLOps), Data Structures and Algorithms, Advanced SQL/DB Management

SKILLS & CERTIFICATION

- **Certifications:** Azure AZ-900 • Azure DP-900 • CompTIA Data+ • CompTIA Project + • AWS Certified Cloud Practitioner
- **Programming & Frameworks:** C#, .NET, ASP.NET Core, EF Core, ADO.NET, Blazor, Aspire, Python, R, SQL
- **Cloud & Tools:** Azure (App Services, SQL Database, Key Vault, DevOps), Docker, Git, CI/CD, AWS
- **AI Machine Learning:** Supervised & Unsupervised Learning, Model Evaluation, MLOps, MLflow, TensorFlow, PyTorch
- **Databases:** SQL Server, Azure SQL, MySQL, Google BigQuery, PostgreSQL
- **Visualizations:** Power BI, Tableau, Google Data Studio

EXPERIENCE

Cloud Application Developer (Learning Internship)   November 2025 – February 2026
Microsoft Software and Systems Academy (MSSA)   Virtual
- Built production microservices on **ASP.NET Core**, applying **SOLID** principles and **Clean Architecture**; implemented dependency injection patterns and **Entity Framework ORM** for scalable backend systems handling high-concurrency scenarios.
- Designed normalized SQL Schemas with comprehensive **query optimization**, achieving **70% + performance improvements**; implemented indexing strategies and **T-SQL** tuning for relational databases under production load.
- Implemented end-to-end **CI/CD** pipelines using **Azure DevOps** and **GitHub Actions** with automated build, unit testing, code quality checks, and containerized deployment to **Azure App Services** – enabling reliable multi-release workflows.
- Developed a comprehensive unit testing suite with **xUnit** and integration tests, achieving **85% code coverage**; implemented structured logging with **Serilog** and **Azure Application Insights** for production monitoring.

Financial Management Technician   July 2020 - July 2024
U.S. Army   South Korea & Texas
- Designed and deployed financial data pipeline automation using **PYTHON** and **SQL Server**, processing $2M+ annual transactions with **99.5% accuracy** in a high-compliance environment; reduced manual processing errors by 40% and improved timeliness by 60%.
- Built predictive analytics system delivering executive insights for strategic **cost optimization** and audit compliance, directly **reducing audit preparation time by 30%;** architected data workflows to support high-stakes financial decision making.

PROJECTS

BMI Calculator Full-stack Web Application (In Progress)
- Architected full-stack **ASP.NET Core** application with **Clean Architecture**, integrating **Blazor**, **EF Core**, and .**NET Aspire** to scale console prototype into a multi-tenant health engine with 6+ interconnected database tables and personalized recommendation system.
- Engineered personalized recommendation engine querying Activity & Food databases to generate meal plans and activity schedules based on BMI, fitness goals, and caloric targets – driving user engagement through data-driven lifestyle suggestions.
- Implemented automated weekly email reminder system with background job scheduling to track progress, compare against Week 0 baseline, calculate BMI trends, and deliver personalized reports – enabling proactive customer retention and re-engagement.

Census Income Classification (FastAPI Deployment)
- Architected and deployed a **FastAPI REST** service for census income prediction with automated **CI/CD (GitHub Actions)**, unit testing (**pytest**), and code quality checks (**flake8**), achieving **95% test coverage** and maintainable production standards.
- Built an ML pipeline on 32K+ census records with **Random Forest**, including preprocessing, feature engineering across 8 categorical variables; with a **68% F1 score model** on sliced data, enabling accurate income classification for the production service.

NYC Airbnb Price Prediction (MLOps Pipeline)
- Developed a production-ready **MLOps** pipeline for 49k+ Airbnb listings, integrating **MLflow, W&B, and Hydra** into a 6-stage workflow for automated validation and training reduced experiment iteration time by 40% while ensuring 100% reproducibility.
- Optimized a **Random Forest regressor** with advanced preprocessing (TF-IDF text, temporal features, outlier removal), achieving $R^2 = 0.562$ and MAE = 33.9; implemented complete artifact versioning and **drift detection** to safeguard model performance.