

KYLE BARNETTE

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Software Engineer | Full-Stack Systems & Applied ML | Python • TypeScript • FastAPI • React

TECHNICAL SKILLS

Languages: Python, Java, C++, C#, JavaScript (ES6+), TypeScript, SQL

Frameworks: FastAPI, Next.js, React, Node.js, Express, ASP.NET

ML / Data: TensorFlow, PyTorch, scikit-learn, NumPy, Pandas

Databases: MongoDB, MySQL

Cloud & DevOps: Docker, Linux (CLI), SSH, Remote Compute / HPC, Git/GitHub

Concepts: REST APIs, OOP, distributed systems, CI/CD, scalability, performance optimization, data structures & algorithms, low-level systems (MIPS, ARMv8)

EXPERIENCE

Outlier AI - AI Project Contributor (Contract, Remote)

Dec 2025 – Present

- Evaluated Python/C++/API systems for correctness and edge-case reliability
- Assessed data flow, architecture, and maintainability using system-level reasoning
- Delivered structured technical documentation under strict quality standards

Artistic Touch Interiors – Warehouse Supervisor (Tulsa, OK)

2011 -

2018

- Supervised warehouse operations, logistics coordination, and inventory workflows in a fast-paced environment
- Managed price-tag printing and distribution processes, ensuring organization and operational accuracy
- Led workflow improvements that increased efficiency and reduced errors through process optimization

PROJECTS

[Churn Prediction SaaS MVP \(Full-stack ML Platform\)](#)

- Built a production-oriented SaaS application using Next.js and FastAPI, designing RESTful ML inference APIs, containerizing services with Docker, and conducting experiments with generative tabular models to improve minority-class recall and AUC.

[Food Calorie Estimator \(Computer Vision\)](#)

- Developed an end-to-end computer vision system using **MobileNetV2, FastAPI, and React** to classify food images and return structured nutrition data through a scalable inference API.

[Java Chess Game](#)

- Engineered a full chess engine in **Java** applying OOP principles, implementing legal move validation, check/checkmate detection, undo functionality, and a Swing-based GUI.

[MERN Stack Library App](#)

- Built a full-stack application using **MongoDB, Express, React, and Node.js**, designing RESTful APIs and implementing real-time check-in/checkout functionality.

EDUCATION

Texas State University - B.S. Computer Science (Applied Mathematics Minor)

Graduating May 2026 | GPA 3.37

Independent Study - Machine Learning Research - Faculty Advisor: Dr. Xiaomin Li

Project: *Gen-AI-Driven Data Augmentation for Imbalanced Churn Prediction in SaaS Companies*

- Investigated generative models for tabular data (CTGAN, TVAE, diffusion-based approaches) to address extreme class imbalance in churn prediction
- Designed controlled experiments evaluating synthetic data impact on AUC, PR-AUC, F1, and minority-class recall
- Built and deployed an end-to-end ML application using **FastAPI** and **Streamlit**
- Produced a technical report and delivered a public presentation with live system demonstration
- Trained and evaluated models using Texas State University GPU resources (NVIDIA-based HPC environment)

CERTIFICATIONS

Microsoft Full-Stack Developer Professional Certificate - Coursera

Completed: Dec 2025

AWS Certified Cloud Practitioner - AWS

In Progress