

BACH NGUYEN

Long Beach, CA | (925)255-6528 | bach.tnguyen@outlook.com

github.com/BachTNDev | linkedin.com/in/bachtn

EDUCATION

California State University Long Beach

Long Beach, CA

Bachelor of Science, Computer Science | GPA: 3.90

August 2022 – May 2026 (Expected)

Minor: Applied Mathematics

Relevant Coursework: Artificial Intelligence, Machine Learning, Data Visualization, Data Structures, Algorithms, Object-Oriented Programming, System Programming, Operating Systems

TECHNICAL SKILLS

Programming Languages: Python, R, C++, C, TypeScript, JavaScript

Data Analytics: Pandas, NumPy, Scikit-Learn, TensorFlow, PyTorch, Matplotlib, Tableau

Frameworks/Libraries: React.js, Next.js, Tailwind CSS

Tools/Environments: VS Code, Git, GitHub, Windows, Linux

PROJECTS

ProMatch Analyzer | *Scikit-Learn, Pandas, Next.js, Tailwind CSS*

January 2025 – Present

- Developed a League of Legends match prediction tool using machine learning, integrating real-time match data from the PandaScore API.
- Designed and optimized a FastAPI backend, utilizing Redis caching to reduce redundant API calls and improve response times by 80%.
- Trained a RandomForestClassifier model on historical match data, engineering features like team win rates, objectives taken, and player performance metrics.
- Built an interactive frontend in Next.js and Tailwind CSS, allowing users to search for upcoming matches and view AI-generated predictions.

AI Research Assistant Web Application | *Next.js, Tailwind CSS, Python, Flask*

January 2025

- Developed a responsive and visually engaging frontend using Next.js and Tailwind CSS, enhancing user experience across devices.
- Designed and built API endpoints with Flask, enabling AI-powered article summarization and dynamic content recommendations using HuggingFace API.
- Optimized keyword extraction algorithms, improving recommendation accuracy by 30% for more relevant topic and link suggestions.

Bookstore Management System | *Python*

November 2023 – January 2024

- Created a Python-based bookstore management system with features such as book search, catalog management, and a dynamic shopping cart.
- Optimized database queries and caching mechanisms, reducing load times and ensuring scalability for large inventories.

EXPERIENCE

Math Tutor

June 2018 – August 2022

Kumon, Walnut Creek, CA

- Developed analytical problem-solving strategies to help students improve their mathematical reasoning and logical thinking.
- Communicated complex mathematical concepts in a clear, structured manner to diverse learners.
- Collected and analyzed student performance data to identify learning trends and improve tutoring strategies.
- Used data visualization techniques to present mathematical concepts clearly.