

# Hong Khai Nguyen

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## EDUCATION

### Evergreen Valley College

A.S. in Computer Science

San Jose

Jan 2024 -- May 2027

## TECHNICAL SKILLS

**Languages:** Java, SQL, Python (Data Analysis), Javascript, Typescript

**Frameworks:** Spring Boot, JUnit, React, Numpy, Scikit-learn

**Developer Tools:** IntelliJ IDEA, Git, Github, Docker, Maven, Linux, Vim, PostgreSQL

## PROJECTS

### **Learnr (CalHacks2025)** | React (TypeScript), Node.js (JavaScript), Express.js, VAPI API, OpenAI GPT-4, ElevenLabs

- Designed and developed an AI-powered learning tutor using TypeScript (React) and Node.js (JavaScript), integrating the VAPI API to deliver conversational lectures where students can interact, ask questions, mute, or end sessions at any time.
- Collaborated closely with a team of four, facilitating regular communication to align feature development, share technical insights, and ensure the AI tutor seamlessly fit into the broader project goals.
- Led feature integration and code reviews for the AI tutor, proactively gathering team feedback and fostering a collaborative environment that prioritized clear communication, shared understanding, and rapid iteration.

### **Simple Bank App** | Java, Java Swing, MySQL, JDBC

- Developed a Java-based weather application with a user-friendly Swing GUI interface, implementing real-time weather data retrieval through RESTful API integration with Open-Meteo services.
- Engineered robust API communication systems using HttpURLConnection, incorporating JSON parsing for handling complex weather data structures, including temperature, humidity, wind speed, and weather conditions.
- Built data processing features with geolocation, time zone handling (LocalDateTime), and unit conversion, ensuring clean separation of GUI and backend.

### **Job Career Level Classification ML System** | Python, Pandas, Scikit-learn, NumPy, Pycharm

- Developed a career-level classification model that achieved 77% accuracy by implementing a Random Forest classifier with advanced text preprocessing and feature engineering
- Implemented an advanced data preprocessing pipeline incorporating TF-IDF vectorization, SMOTE oversampling, and Chi-squared feature selection to handle imbalanced job posting data.
- Optimized model performance—improving F1 score by 15%—by conducting GridSearchCV hyperparameter tuning and engineering features from job titles, descriptions, locations, functions, and industries.

## EXPERIENCE

### **Java Programming Tutor (Part-time)**

*Evergreen Valley College*

Aug 2025 -- Present

San Jose, CA

- Improved student exam performance by 25% as measured by pre/post assessments, by delivering targeted 3-hour tutoring sessions in Java, OOP, data structures, and algorithms using IntelliJ IDEA and Git.

### **Data Science Embedded Tutor (Part-time)**

*Evergreen Valley College*

Jan 2025 -- Apr 2025

San Jose, CA

- Enhanced student proficiency in Python and NumPy, increasing assignment pass rates by ~35% and reducing average debugging time by ~40%, by providing embedded tutoring, hands-on visualization labs, and code-optimization guidance

### **Project Manager (Part-time)**

*EVC Computer Science Club*

Jan 2024 -- Apr 2024

San Jose, CA

- Collaborated with a team to assemble and operate a Raspberry Pi G1 Tank robot, utilizing built-in sensors for obstacle detection and movement control.

