

# DAN NGUYEN

+1 571-320-9521 | danunguyen.work@gmail.com | linkedin.com/in/dannguyen24 | github.com/dannguyen24

## EDUCATION

### George Mason University

B.S. in Computer Science; GPA: 3.94/4.0 – Dean's List

Fairfax, VA

Expected May 2027

## EXPERIENCE

### Teaching Assistant

Jan 2024 – Now

George Mason University - Object, Low-level Programming, Data Structures and Algorithms

Fairfax, VA

- Guided 900+ students in programming labs by leading debugging and concept review sessions in subjects such as Object-Oriented Programming, Low-Level Programming and Data Structures and Algorithms.
- Facilitated weekly coding practice labs for 50+ students over 12 weeks, improving participants' debugging and strategizing efficiency when tackling advanced programming problems.

### Software Engineer Fellow

Jan 2024 – May 2025

George Mason University

Fairfax, VA

- Streamlined and maintained the syllabus submission pipeline using Selenium and BeautifulSoup to automate data collection for 60 professors in the CS Department.
- Engineered a comprehensive dashboard with MkDocs to allow the viewing and filtering of 300+ syllabi based on parameters such as school year, class, and instructor; enhancing the accessibility of study materials.
- Developed a web scraper with Flask to extract 150+ technical reports dating back to 1992 from the department's website, reducing manual workload by 96%.

## PROJECTS

### StudyEZ | [Github](#) | [Python](#), [React](#), [Flask](#), [MongoDB](#), [AssemblyAI](#), [Google Gemini API](#)

- Led a team of 4 to build a full-stack study assistant platform that suggests personalized online materials and transforms lecture recordings and text documents into AI-generated notes, enhancing study resource organization.
- Leveraged third-party API libraries including AssemblyAI and Google Gemini API to automate transcription and summarization, enabling audio extraction across YouTube, PDF, DOCX, MP4 and MP3.
- Developed 17 Flask backend API endpoints for authentication, document upload and submission, audio-to-text extraction and transcription, and auto-generated study material suggestion.
- Designed MongoDB schemas for structured notes and users management, enabling the efficient sorting and look-up of students' notes by study subjects, classes, and topics.

### Local Taste | [Github](#) | [React](#), [Node.js](#), [Express.js](#), [MongoDB](#), [JWT](#), [Postman](#), [Git](#), [Figma](#), [Pinecone](#)

- Collaborated with a team of 4, applying agile development practices to build a web platform connecting travelers with local hosts, enabling users to discover authentic experiences such as cultural events and local dining.
- Implemented the complete authentication flow including account creation and login using JSON Web Token and Google OAuth with secure route protection and session handling.
- Built the on-boarding process infrastructure for when a user signs up for the application, refined across 4 iterative enhancements from supervisors to improve user experience and security.
- Applied MongoDB aggregation pipelines to filter requests and listings based on various criteria such as dates, dietary restrictions, and number of guests, with pagination to support loading speed and scalability.
- Spearheaded the development of a semantic search system for user queries, applying OpenAI Embedding APIs and Pinecone to create embeddings for 1,000+ listings.
- Improved query handling accuracy by categorizing queries into structured, semantic, hybrid, or fallback types, resulting in faster filtering, more relevant recommendations.
- Engineered 9+ API endpoints for role-based validation and request management flow, enabling guests to create requests and allowing hosts to manage listings, accept requests, negotiate prices, and control availability.

### Fall Guys | [Github](#) | [Flask](#), [React](#), [OpenCV](#), [MediaPipe](#), [Twilio](#), [JWT](#)

- Built a full-stack safety app for elderly care using React, Flask, and OpenCV + MediaPipe to detect falls in real-time.
- Implemented user authentication with JSON Web Token (JWT) and integrated Twilio API to trigger immediate emergency phone calls upon fall detection.

## TECHNICAL SKILLS

**Languages:** Python, Java, C/C++, SQL, Typescript, Javascript, HTML/CSS, R

**Frameworks:** React, Node.js, Flask, JUnit, Tailwind CSS, Shadcn, REST APIs, Tomcat, Angular

**Developer Tools:** Git, Google OAuth, Gemini API, VS Code, IntelliJ, Maven, Postman, AWS, Pinecone

**Databases:** SQLite, MySQL, SQL, MongoDB, PostgreSQL, DynamoDB

**Other:** Agile Development, Software Development Lifecycle, Web service design