

DEV PATEL

devk.patel@outlook.com | [linkedin/Dev](#) | [github/Dev](#)

EDUCATION

University of California, Irvine

Sept 2021 - Dec 2025

B.S. in Computer Science & B.S. in Game Development

Irvine, CA

Overall GPA: 3.99 / 4.00 - Dean's Honor List

Coursework

Data Structures & Algorithms, Principles in System Design, Information Retrieval, AI & ML, Introductory Computer Organization, Introductory Data Management, Principles of Operating Systems, Compilers & Interpreters, Programming Languages

EXPERIENCE

Partner Engineering & Science, Inc.

Jan 2025 - Jun 2025

Software Engineer (Academic Partnership)

Irvine, CA

- Developed an AI-powered real estate document parser web app using **Python**, **Flask**, and **OpenAI**, automating the extraction of structured data from complex PDF legal documents.
- Engineered a high-performance backend pipeline utilizing **Unstructured** for OCR/text extraction and integrated **ChromaDB** for efficient vector-based storage and retrieval.
- Benchmarked and implemented optimal PDF-to-JSON conversion strategies, significantly reducing manual data entry overhead for the client via a streamlined RESTful API.

Learning Assistant

Apr 2024 - Jun 2024

Course Staff for 'Programming in C++' at UC Irvine

Irvine, CA

- Mentored 25+ students in C++ fundamentals, providing technical guidance on memory management, pointers, and Object-Oriented Programming (OOP) principles.

PROJECTS

Into the Light

Oct 2024 - Mar 2025

Lead Programmer | Unreal Engine 5 Game

- Engineered a complex enemy AI system utilizing **Behavior Trees** and **Blackboards** to implement dynamic environmental awareness and adaptive awareness states.
- Facilitated **Agile development** by managing bi-weekly sprints, delegating technical tasks, and prioritizing project milestones to minimize workflow bottlenecks.
- Orchestrated version control workflows via **Git**, resolving merge conflicts to integrate cross-functional assets into stable game builds.

Toy Language Compiler

Jan 2025 - Feb 2025

- Engineered a multi-stage compiler in **Java** utilizing **ANTLR** for lexical analysis and context-free grammar parsing to support a custom high-level language.
- Architected the full compilation pipeline, from constructing an AST and Symbol Table for semantic analysis/type checking to generating **x86-64** assembly, supporting features like variable assignment, function calls, and control flow.

Search Engine & Indexer

May 2024

- Engineered a high-performance inverted index from a large document corpus, implementing postings lists with disk-based storage to optimize memory overhead.
- Developed a retrieval engine capable of processing multi-word queries, utilizing tf-idf to return relevant results with sub-second latency.

SKILLS

Languages

Python, C++, Java, C, C#, x86 Assembly

Frameworks & Tools

Flask, ChromaDB, Unstructured, Git, Perforce, Jira, OpenAI API

Game Engines

Unreal Engine (UE4/5), Unity, Godot