

# IMRAN AHMED

(773) 983-5863 | [ia237808@gmail.com](mailto:ia237808@gmail.com) | [linkedin.com/in/imran12234](https://www.linkedin.com/in/imran12234) | [github.com/imran12234](https://github.com/imran12234) | [imrans.live \(portfolio\)](https://imrans.live) | USA CITIZEN

## EDUCATION

### DePaul University

Expected Graduation June 2026

Master of Science in Artificial Intelligence

Chicago, IL

Bachelor of Science in Computer Science, **GPA: 3.7**, Dean's List for 6 Quarters

**Relevant Coursework:** Algorithms, Database Systems, Data Structures, Discrete Mathematics, Computer Systems, Distributed Systems, Artificial Intelligence, Neural Networks, Linear Algebra, Software Testing, Machine Learning, Object-Oriented Programming

## WORK EXPERIENCE

### Kentish Publishing Company (Narrative Behind Words)

Mar 2026 – Present

Software Engineering Intern

- Architecting a full stack rebuild of a narrative analysis platform, migrating legacy React systems into independent infrastructure with custom backend APIs and relational database design.
- Engineering software from documented algorithms, including a proprietary 3-process reflection framework, building RESTful endpoints and React interfaces to serve real-time writing analysis to end users.

### SplitAI — AI-Powered Expense Splitting Platform | [splitai.dev](https://splitai.dev)

Dec 2025 – Present

Founder & Software Engineer

- Engineered a multi-stage NLP pipeline using Claude API that parses natural language expense descriptions into structured JSON, with prompt optimization achieving 90%+ extraction accuracy on fields like amount, participants, and split type.
- Built a vision-based receipt OCR system with model selection analysis (cost vs. accuracy tradeoffs), client-side image preprocessing, and confidence-scored output with human-in-the-loop verification.
- Architected a Spring Boot backend with RESTful APIs, JWT authentication, PostgreSQL with JPA/Hibernate, and relational data modeling across users, groups, expenses, and payments.
- Implemented a graph-based debt simplification algorithm that reduces  $O(n^2)$  pairwise debts to minimal transfer sets, decreasing average settlement transactions by 60%+.
- Deployed with Docker on DigitalOcean with CI/CD via GitHub Actions, Spring profiles (dev/prod), and managed PostgreSQL

### Black Fox Security Solutions

June 2024 – Aug 2024

Software Development Intern

Aurora, IL

- Refactored and debugged Python and JavaScript scripts to improve system reliability and created automation scripts that enhanced testing efficiency.
- Collaborated with developers via Git and GitHub in an Agile environment with daily standups and sprint planning.

### Humble Properties

Oct 2021 – Sept 2022

IT Support Specialist

Chicago, IL

- Resolved 20+ hardware and software issues per week while communicating technical solutions to non-technical users, achieving a 95% satisfaction rate.

## RELEVANT PROJECTS

### ChiGo – AI-Powered Trip Planning Web App | Live Demo: [chi-go-v2.onrender.com](https://chi-go-v2.onrender.com)

March 2025 – Present

Python, Django, PostgreSQL, OpenAI API, Google Places API, Google Routes API, Docker

- Built a full-stack Django web app that generates personalized multi-day Chicago itineraries using OpenAI GPT-4o-mini, based on user survey preferences for cuisine, activity level, budget, and neighborhoods.
- Designed an AI prompt pipeline enforcing structured JSON output with day-by-day activities, then enriched each item with real coordinates, photos, and addresses via Google Places API.
- Developed an interactive activity-swapping system allowing users to replace itinerary items with AI-generated alternatives, updating the database and session state in real-time.
- Containerized with Docker and deployed to Render with Gunicorn, managed PostgreSQL, and WhiteNoise for static file serving.
- Collaborated in a 6-person Agile team using GitHub pull requests and branching strategies across 3 sprint cycles.

### Handwritten Equation Recognition using CNNs

March 2025 – June 2025

Python, PyTorch, PIL, NumPy, MNIST

- Designed a custom multi-headed CNN with independent token-wise prediction heads, achieving 87.71% test accuracy on 5-token handwritten arithmetic equations.
- Trained on a custom synthetic dataset built with PIL and MNIST digits using multi-output cross-entropy loss over 70 epochs.

## TECHNICAL SKILLS

**Languages:** Python, Java, TypeScript, HTML, CSS, C++, SQL

**Frameworks/Libraries:** Django, React, Node.js, Next.js, Spring Boot, Docker, Express

**Databases:** PostgreSQL, MySQL, MongoDB

**Tools/Platforms:** Git, GitHub, Linux, Postman, VS Code, AWS, CI/CD, OpenAI API, Google Places API

**Machine Learning:** NumPy, Pandas, scikit-learn, PyTorch, TensorFlow, OpenCV, Matplotlib