

# ZACK EDDS

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## Education

**University of Illinois Urbana-Champaign**, Grainger College of Engineering

Computer Science — AI & Data Focus

Masters in Computer Science

GPA: 3.96/4.00

B.S. expected May 2026

M.C.S. expected May 2027

## Experience

**Apple Inc.**, Software Engineering Intern, Cupertino, CA

May 2025–Aug 2025

- Led pre-submission testing for the Books/Notes iOS26 redesign, including seed and Root build sign-offs.
- Filed 28 critical P1 bugs; in the first two months ranked second of eight FTE engineers.
- Prototyped an AI-driven pipeline to automatically verify bug fixes on-device via Radar and GitHub integrations.
- Created documentation covering 30+ Book Store elements, streamlining bug reporting and testing.
- Onboarded a new hire, wrote tailored documentation based on my own onboarding.

**University of Illinois Urbana-Champaign**, Research Assistant — AI & Computer Vision

Jun 2024–Aug 2024

- Synthesized human hand-object interaction datasets under Professor Saurabh Gupta, specializing in computer vision, robotics, and machine learning.
- Adapted transformer-based algorithms for 3D hand reconstruction.
- Designed and ran experiments to analyze poses, applying statistical methods for distance mapping.
- Integrated accelerometer and gyroscope data to capture degrees of freedom, segmenting hand features from images to train robotic policies.
- Presented findings at the UIUC Research Symposium; Research contributed to a paper accepted to CVPR 2025.

**U.S. Department of Energy**, Software Engineering Intern, Argonne National Laboratory

May 2023–Aug 2023

- Built interactive Svelte front-end for electric vehicle charging calculator metrics based on an API call for AFLEET carbon emissions web app. Used Git to contribute code and fix bugs.
- Analyzed SQL database and wrote queries to construct electrical-rate tables.
- Optimized model with advanced data validation, EV-charging algorithm, and data visualization.
- Identified and reported a critical flaw to the United States Utility Rate Database team.

**LanzaJet Inc.**, Software Engineering & Finance Intern

Jun 2022–Sep 2024

- Built Python tool to generate jet-fuel and commodity-market statistics with Matplotlib, sourcing data from XML-based SOAP API, JSON-based REST API, and web scraping via Beautiful Soup.
- Automated extraction of commodity metadata for financial modeling; serialized parameters to JSON and crafted Python pipeline to retrieve them and analyze data with Pandas.
- Led cross-functional team to design and build refinery Sample Lab Test Inventory system in MS Power Apps; secure forms feed Dataverse database, which drives AVEVA PI Vision dashboards or exports to Excel.

## Project Highlights

### McKinley Health Chatbot

- Flask backend with FAISS retrieval & HuggingFace hosted Llama LLM
- Scraped 700+ health center pages
- Embedded text with transformer

### Graffiti at UIUC Spot App

- SwiftUI iOS app to catalog graffiti
- Saved pictures with SwiftData
- Used MapKit to display locations

### Trading Paper Stock App

- Flask web app - Yahoo Finance API
- MySQL database on Google Cloud
- SQL queries for trading leaderboard

## Technologies

**Languages & Technologies:** Swift, Python (NumPy, Pandas, TensorFlow), C++, Java, SQL

**Skills:** Machine Learning & Data Analysis, Web Development, Automation Pipelines, Systems Programming, Git