ZACK EDDS

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Education

University of Illinois Urbana-Champaign, Grainger College of Engineering   Master's expected May 2027
BS/MCS 5-Year Program in Computer Science - AI & Data Focus   GPA: 3.96/4.00

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+ App 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