Robert Hand

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EDUCATION

University of Illinois at Urbana-Champaign — Expected May 2027
Bachelor of Computer Science — *Cumulative GPA: 3.9/4.0*
Relevant Coursework: Applied Machine Learning, Database Systems, Text Information Systems, Data Structures and Algorithms, System Programming, Numerical Methods, Linear Algebra, Software Design Lab

EXPERIENCE

Software Engineering Intern — May 2025 – Present
Synchrony — *Champaign, IL*
- Developed Java Springboot application for automated data pipeline control actions with EIS App Scorecard team
- Worked on app health dashboard API to monitor latency and CPU/Memory usage for all internal company apps
- Built automated test suite with 95% coverage for enterprise database systems in SQL and Cassandra

Software Engineer — Sep. 2024 – Present
Disruption Lab at Gies — *Champaign, IL*
- Deployed full stack workflow management tool for Data Science Research Institute
- Built CSV to interactive graph visualizer using React and VueJS
- Managed graph data with NextJS API and Neo4j database

Undergraduate Researcher — Sep. 2024 – Present
Forward Data Lab — *Champaign, IL*
- Worked with Prof. Kevin Cheng on RAG models for query-based research summarization
- Built an automatic survey paper generation tool using Natural Language Processing and GPT Researcher API for bias reduction

Software Engineer — Sep. 2024 – Dec. 2024
Powerbox Technologies — *Champaign, IL*
- Modeled predicted power use in Latin America using an additive regression model
- Trained machine learning models on 200,000+ time series data using Google Cloud Platform and Prophet API
- Developed a cloud scheduler to regularly refresh client data using VertexAI

Teaching Assistant — Apr. 2024 – Present
Siebel School for Computer Science — *Champaign, IL*
- Assisted Prof. Nowak in developing course content for Intro to Computer Science II
- Hosted weekly office hours to help over 800+ enrolled students on 95+ weekly lesson topics
- Led multiple discussion sections per semester in lesson activities and guided students through readings

PROJECTS

MusicElo | musicelo.vercel.app | *ReactJS, Tailwind, NodeJS, FastAPI, Postgres SQL, Python, Supabase* — July. 2025
- Built a full stack Elo rating site for 2500+ popular songs using Spotify API and Kaggle data
- Deployed FastAPI on Render to enable live voting and Elo leaderboard on React frontend
- Integrated Postgres SQL database on Supabase with API endpoints for fast rating calculations
- Scaled FastAPI to handle 1000+ API calls and optimized API functionality for lowered latency time

AltCredit | alt-credit-hack-illinois-2025.vercel.app | *ReactJS, NextJS, NodeJS, Python, Pyspark, Tailwind* — Feb. 2025
- Deployed a full stack web application for HackIllinois Capital One track
- Built and deployed backend api for parsing and data extraction from financial documents
- Trained random forest learning model on pyspark for determining alternative credit scores
- Developed interactive UI using ReactJS, Typescript, and Tailwind for users to determine loan eligibility

TECHNICAL SKILLS

Languages: Python, C/C++, SQL, PostgressSQL JavaScript/Typescript, HTML/CSS, Java, Kotlin, Bash
Frameworks: React, NodeJS, NextJS, ExpressJS, Java Springboot, Flask, FastAPI, Postman, RESTful API, Neo4j,
Developer Tools: Google Cloud Platform, Git, Docker, AWS, MongoDB, Cloud Computing, Agile, Kubernetes
Libraries: Pandas, NumPy, Matplotlib, Sympy, Scipy, Scikit Learn, Beautiful Soup, Mongoose, Tensorflow, Selenium