ANEESH GANTI

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EDUCATION

University of Illinois at Urbana-Champaign — Expected Graduation: May 2027
Bachelor of Science in Mathematics and Computer Science — GPA: 3.65/4.00

Relevant Coursework: Data Structures and Algorithms, Applied Machine Learning, Software Design Lab, Database Systems, Deep Learning for Computer Vision, Computer Architecture, Honors Real Analysis, Numerical Methods, Probability & Statistics

WORK EXPERIENCE

Full-Stack Software Engineer Intern — Remote
Tekweld Manufacturing — April 2025 – Present

- Led team of 3 interns to build and deploy Promo Pigeon, a sales tool that automates business targeting, personalized marketing, order fulfillment, and shipping for manufacturers seeking new clients for promotional products, on AWS.
- Developed Flask-based backend system with RESTful APIs and scalable PostgreSQL database and React-based frontend using Node.js, TypeScript, and CSS; Integrated OpenAI models for product recommendations and quality assurance.
- Automated scraping 1000+ business leads per region on Google Maps with >85% data completeness using Playwright.

Data Engineer Intern — Urbana, IL
PhinD Experts – Matching PhD Researchers to Industry — May 2025 – August 2025

- Engineered large-scale publication extraction from Google Scholar using Python, Selenium, and BeautifulSoup for browser automation and precise HTML parsing to enhance candidate database with 5,000+ new research records.
- Revamped ETL pipeline using Pandas and SQLAlchemy to load researcher data into PostgreSQL database hosted on AWS RDS and managed batching workflows using Apache Airflow and Great Expectations for continuous data quality.

Software & Simulations Lead Engineer, Researcher — Huntsville, AL
NASA 2025 Human Lander Challenge — August 2024 – July 2025

- Designed ECLIPSE, a spacecraft-agnostic cryogenic propellant transfer protocol for Artemis Missions, and presented findings to NASA's Cryogenic Fluid Management Department at Marshall Space Flight Center; Won Best Presentation.
- Prototyped and tested a Python-based ML pipeline using Fuzzy C-means clustering and Gaussian Process Regression for data preprocessing to map 2-phase flow regimes from Ansys simulation data, boosting transfer efficiency by 84%.

Course Assistant (CS 173: Discrete Structures) — Urbana, IL
Siebel School of Computing and Data Science — January 2025 – Present

- Host office hours and discussions to assist students with solving lab problems and studying for rigorous examlets.
- Teach topics related to data structures, algorithm analysis, formal logic and set theory, and proof-writing techniques.

PROJECT HIGHLIGHTS

Model Fitting Techniques for Josephson-Junction Arrays — October 2024 – Present

- Modeled the geometric configuration of Josephson junction arrays in superconducting quantum architectures using TensorFlow with Adam and momentum gradient descent optimizers to improve configuration accuracy.
- Implemented custom tabular Q-learning agents in Python with vectorized state/action updates; Migrated workflow to an optimized C++ engine to generate high-quality initial conditions, accelerating convergence rates by 38%.

NVIDIA AI Agent Builder Hackathon – ScraperAgent — July 2025

- Built a multimodal AI agent integrating Nemotron 3.3 Super and Kosmos-2 Vision models with a FastAPI backend and LangChain's agentic framework to extract unstructured data from dynamic websites using 8-iteration decision loops.
- Utilized Docker containerization and the Brev Platform's cloud GPU provisioning to deploy a scalable and robust launchable, featuring multi-format outputs, asynchronous URL scraping, and comprehensive error monitoring.

TECHNICAL SKILLS

Programming Languages: Python, Java, C++, JavaScript, TypeScript, SQL, C, HTML, CSS, Swift, Golang, Verilog, MIPS, R
Frameworks & Libraries: TensorFlow, PyTorch, React, NodeJS, Angular, Flask, LangChain, FastAPI, RESTful APIs, Scikit-learn
Tools & Services: Git, Amazon Web Services (AWS), Docker, Kubernetes, CI/CD, PostgreSQL, Firebase, Hugging Face, Linux
Certifications & Awards: AWS Cloud Practitioner, Amateur Radio Relay League Technician License

Things to Do:
1. Finish NeetCode hard problem - done
2. Fix scrolling feature in flyer select - done
3. Apply to 4 new positions and notify Dad. - done
4. Finish Week 1 work for CS 441 - done

8/31/25
1. Look into OA for IBM - done
2. Finish PR changes from Kenny - done
3. Review CS 441: Applied Machine Learning answers - done
4. Upload and submit HW for CS 374 - done

5. Brainstorm ideas for demo for project to show at career fair.
 - For concept to MVP process, use the saved IG post as inspo
6. Finish LogoGenerator project.
7. 1 Hour AWS Notes

Long term:

 - Fix and polish Tensor Crop AI (Hackillinois)
 - Finish LogoGenerator
 - Finish ScraperAgent (let's try doing SpringBoot?)
 - Update Portfolio with up-to-date
 - Start IG notes saver.
 - CS or Networking focused project / tool
 - Finish AWS Cert
 - DevOps and Infrastructure as Code projects and sequence
 - NeetCode Hard

New work for Promo Pigeon
 - Themes from AI Gen, Logos (not as important), uncropped_png
 - Pillow: python image library.
 - Compressed image must remain png, not jpg.
 - One method, no hardcoded values for each.

Afterwards:
 - Analytics
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