

Maheen Masoud

198 College Hill Road, Clinton, NY 13323 | maheenmasoud54@gmail.com | 315-570-8162 | [LinkedIn](#)

Education

- **Hamilton College - 3.8/4.0 GPA** *BA (Computer Science, Mathematics - Dec 2024)*
- **University of Manchester, First Class** *Computer Science, Mathematics - Study Abroad Program, 2023*

Honors and awards

- Dean's list (all semesters)
- Sam Welsch Memorial Prize Scholarship in Computer Science, Arnold L. Raphael Memorial Scholarship
- Outstanding Cambridge Learner Awards - Mathematics (Top in the world), Physics (Top in the region)

Technical languages and frameworks

- Python, C++, Go, SQL, Ruby, R, Prolog, Assembly, Bash, React, PyTorch, AWS, LLMs, Pandas, Docker
- Version control - Git (Github, Gitlab)

Relevant Coursework

Advanced Algorithms, Introduction to AI, Deep Learning, Statistics (1, 2), Operating Systems, Databases, Linear Algebra

Experience

Machine Learning Software Engineer Intern - Asurion

Nashville, TN (May 2024 - Aug 2024)

Expert Assist Autocomplete Feature

- Created the backend server of an autocomplete feature for Asurion's global call centers, leveraging AWS, Python Async IO, AIOHTTP, and LLMs to generate real-time low-latency recommendations, expecting to decrease call resolution time by ~15 seconds and save ~\$1.2 million.
- Implemented Kafka logging to track recommendations and errors, and managed exception handling to ensure the server remained operational 24/7 for a pilot of 20+ experts.
- Took ownership of the product and collaborated closely with 6 teams on the feature's design, implementation, and integration with the company's Expert-Assist platform.

Multi-class Call Classification

- Developed a classification model using LLMs to categorize and sub-categorize 200+ daily calls, enhancing customer service analytics for a potential client partnership of \$10+ million.
- Deployed the classification model using Amazon SageMaker, automating daily querying and batch processing.

Software Engineering Intern - Data Science & Machine Learning - FairMarkit

Boston, MA (June 2023 - Aug 2023)

- Developed a Python-based tool to assist ~40% of internal queries enhancing FairMarkit's recommendation system.
- Implemented 10 PyTest unit tests, expanding code test coverage by ~10%.
- Created 4 API endpoints within the recommendation system, incorporating SQL queries and AWS S3.
- Optimized Elasticsearch history storage, decreasing storage memory requirements by ~30%.
- Designed and implemented a user-friendly app using Streamlit for tool utilization.

AI Research Fellow - Hamilton College

Clinton, NY (Jan 2022 - June 2022)

- Fine-tuned 2 GPT AI models on 8 datasets containing 8000+ natural language tokens to generate a 5000+ word script for an AI opera for 50+ audience members.
- Designed 5 background themes through image manipulation using Python (Pillow, Numpy) and DeepDream AI.

Front End Development Intern - Reiform

Remote (Jan 2022 - April 2022)

- Collaborated with the development team to create 6 web pages for Reiform's computer vision data preparation web interface, utilizing React, TypeScript, HTML, Tailwind CSS, and Node.js.

Computer Science Teaching Assistant - Hamilton College

Clinton, NY (Aug 2021 - Present)

- Tutored 50+ students in labs for courses in C++ Design Principles and CS101.
- Assessed projects, provided feedback, and graded exams for 100+ students for Data Structures & Algorithms.

Projects

- **OpenAI Chatbot:** Chatbot using GPT- 4 on a 2000+ word dataset, integrating Python's GTTS and Pygame libraries.
- **Nutrition Assistant:** Personal nutrition assistant utilizing OpenFoodFacts, OpenCV, LLMS, GTTS, and Pygame.
- **Othello Game Player and Tournament:** Othello game player using Alpha-Beta pruning and Monte Carlo tree search, along with a tournament class for competitive game-play.
- **Graph Pruning Betweenness Centrality Estimator:** Python-based pruning and estimation algorithm for networks.