Hanna Jiang

301-520-9864 — hannajiangg@gmail.com — linkedin.com/in/hannajiang — github.com/hannajiangg — hannajiangg.github.io

Education

University of Massachusetts Amherst
MS in Computer Science Expected: Dec. 2025

- GPA: 4.00/4.00
- Awards: Baystate Scholar (100% tuition waiver), Graduate Teaching Assistant
- Relevant Coursework: Machine Learning, Distributed Systems, Natural Language Processing, Game Theory, Software Engineering

University of Massachusetts Amherst
BS in Computer Science Expected: Dec. 2024

- GPA: 3.94/4.00
- Awards: $12,800 Sherwood Delaney Scholarship, $7,200 John and Abigail Adams Scholarship
- Organizations: ACM Machine Learning Club (Marketing Coordinator), Rewriting the Code
- Relevant Coursework: Artificial Intelligence, Software Engineering, Database Design, Algorithms, Data Structures, Object-Oriented Programming, Multivariable Calculus

Experience

Amazon Web Services
Software Development Intern Jun. 2024 – Aug. 2024

- Spearheaded tools to address recurrent throttling issues, eliminating manual intervention and enhancing system reliability.
- Developed Java packages for automated throttling systems using AWS services like Lambda, API Gateway, and CloudWatch.
- Designed and implemented 5 real-time dashboards using CloudWatch and Grafana, achieving $1M/mo savings worldwide.

Lab for Advanced Sleep Software and Sleep, UMass Amherst
Software Engineering Intern Jun. 2023 – Aug. 2023

- Built a Streamlit dashboard for real-time sleep data analysis, improving research efficiency researchers.
- Led data visualization efforts using Pandas, Matplotlib, and Plotly, creating interactive charts to highlight trends in sleep.
- Managed participant data in REDCap and enforced SQL-based validation checks, reducing data entry errors by 25%.

Lab for Internet-scale Distributed Systems, UMass Amherst
Research Assistant Jun. 2023 – Aug. 2023

- Enhanced real-time NeRF training performance by 20% by optimizing the Ringmaster framework using C++.
- Tuned NVIDIA's multi-resolution hash encoding algorithm, accelerating novel view synthesis by 15%.
- Presented advancements in training and rendering efficiency at Summer Research Symposium to 120+ attendees.

Neuro Learning and Performance Lab, UMass Amherst
Research Assistant Dec. 2021 – May 2022

- Engineered machine learning models PyTorch and TensorFlow to analyze eye-tracking and multimodal datasets.
- Performed statistical analyses in MATLAB using Bayesian inference, revealing novel patterns in rapid decision-making.
- Coordinated and managed over 30 participants to collect high-quality data, ensuring the reliability of research outcomes.

Projects

TuneLink — *React Native, MongoDB, Expo, Express.js, Swagger UI*

- Built a cross-platform mobile app with React Native and Expo, enabling seamless music sharing on iOS and Android.
- Developed RESTful APIs using Express.js and MongoDB, ensuring scalable and secure data handling for content.
- Implemented a personalized recommendation algorithm, enhancing user engagement and content discovery.

Schedule Builder Website — *JavaScript, Python, Next.js, MongoDB, Flask, React*

- Developed a full-stack schedule builder, collaborating in an Agile team and improving project delivery by 20%.
- Designed and implemented a React front-end and integrated MongoDB for real-time data storage, enhancing scalability.
- Implemented to generate non-overlapping course schedules based on user preferences, enchancing user experience.

OverMath — *Unity, C#, UI, Adversarial AI, Pathfinding AI* Oct. 2024 – Dec. 2024

- Designed and developed a Unity-based game inspired by OverCooked, integrating mathematical challenges.
- Implemented advanced pathfinding AI to manage customers, enhancing game dynamics and player engagement.

University Buy and Sell Website — *JavaScript, HTML/CSS, PouchDB, Express.js*

- Built a full-stack marketplace app with Google authentication, leveraging PouchDB for secure and offline-first data storage.
- Designed and implemented Express.js API endpoints, improving efficiency and reducing data processing time by 20%.
- Designed mockups in Figma, streamlining the design process and aligning the development with user needs.

Technical Skills

- **Languages:** Python, Java, C/C++, JavaScript, TypeScript, HTML/CSS, SQL, R, Go, Shell Scripting
- **Libraries:** Pandas, PyTorch, TensorFlow, NumPy, Matplotlib, OpenCV, Scikit-Learn, Keras
- **Tools and Frameworks:** AWS, Azure, Google Cloud Platform (GCP), ReactJS, NodeJS, Flask, Django, Git, Docker, Kubernetes, Rest API, GraphQL, FastAPI