Bitania Yonas

Nyack, NY | byonas21@stac.edu | https://www.linkedin.com/in/bitania-yonas/ | https://github.com/bita-yonas

EDUCATION

St. Thomas Aquinas College (NY) **Expected Graduation: May 2026**
Bachelor of Science, Computer Science **GPA: 3.7**
Relevant Coursework: Data Structures, Algorithms, Software Engineering, Machine Learning

SKILLS

Languages **Proficient**: C++ (3yrs) ▪ Python (2yrs) ▪ C# (2yrs) **Intermediate**: Java (1yrs) ▪ JavaScript (1yrs) ▪ TypeScript (1yrs)
Software AWS ▪ React.js ▪ Next.js ▪ Node.js ▪ Firebase ▪ Vercel ▪ OpenAI API ▪ Langchain ▪ TensorFlow ▪ Jupyter Notebook ▪ Git ▪ SQL ▪ Firebase/Firestore ▪ Model Deployment

EXPERIENCE

Software Engineering Resident - Headstarter, New York, NY **09/2024 - 04-2025**
• Building full stack AI projects in Python like churn prediction and brain tumor classification with neural networks and machine learning models and large language models such as Meta Llama 3.2 & Google Gemini
• Developed a full stack web application to perform multimodal RAG models over codebases using the GitHub API and Pinecone
• Deployed an stable diffusion image generation model using HuggingFace Transformers and Modal, integrated with Next.js frontend
• Collaborating with mentors for code reviews and weekly discussions, and mentored by a senior software engineer.

Software Engineer Fellow - Headstarter, New York, NY **07/2024 - 09/2024**
• Built five full stack AI projects using React, TypeScript, and OpenAI API and deployed them in production environments.
• Developed a full stack web app using React, Next.js, TypeScript, and Clerk to assist users with writing documents with LLMs
• Developed collaborative workflows to enhance team-based project management and efficiency.
• Designed and presented AI solutions to senior engineers and key stakeholders for feedback.

Software Engineer - XLab Research New York, NY **09/2023 - 05/2024**
• Developed a virtual reality environment using Unity with C# scripting and 3D design.
• Implemented Cinemachine to enhance camera motion and user interaction.
• Built interactive elements to improve the educational experience within the VR environment.
• Designed the XLab website to showcase projects and research.

Software Developer - Tech Innovators, Detroit, MI **02/2023 - 04/2024**
• Developed task management software using Python and Java to enhance team collaboration.
• Designed and organized coding workshops, leading team discussions on key development topics.
• Created and tested software to ensure system reliability and high-performance standards.
• Implemented process automation solutions to significantly increase overall productivity.

Software Engineering Tutor - YMCA,Addis Ababa, Ethiopia **09/2019 - 06/2020**
• Created foundational web development skills for high school students by teaching HTML.
• Implemented coding workshops, providing hands-on guidance on programming concepts and techniques.
• Designed engaging STEM activities that enhanced critical thinking and problem-solving skills.

PROJECTS

XLab Research Project | Team Project (~700 hours) ***Sep 2023 - May 2024***
-Developed a VR environment for educational research with Unity and C# scripting for interactive simulations.
-Solved intricate dynamic camera motion path issues using Cinemachine to elevate realism and engagement.

Brain Tumor Classification |Open-Source (~40 hours) - [GitHub] ***Nov 2024 - Dec 2024***
-Used neural networks in Python to classify 1000 MRI scans into 3 types of possible brain diseases with custom model architecture
-Generated multimodal MRI reports using Google Gemini API in under 200MS after image classification, construction & training

US-Bank Churn Prediction | Team Project (~30 hours) - [GitHub] ***Sep 2024 - Oct 2024***
- Used 30k+ data set, Llama 3.1b, Groq and Vercel to predict when a banking customer churns using multiple machine learning models
- Created an end-to-end solution complete with sending automated personalized email to banking customer based on feature engineering, normalization, model training, evaluating and hyperparameter tuning across 5 LLM models

Market Anomaly Detection | Solo Project (~60 hours) - [GitHub] **Jan 2025 – Feb 2025**
- Developed multiple ML models in Python for financial crash prediction using anomaly classification across 10+ years of market data
-Engineered custom indicators, normalized features, and visualized outputs to enable early detection of crash vs. no-crash scenarios

Discord Clone – Real-Time Chat & Video | Solo Project (~120 hours) - [GitHub] **Mar 2025 – Apr 2025**
-Built a full-stack real-time chat app with video calling using Next.js, TypeScript, WebRTC, and Socket.IO for dynamic communication
-Engineered a scalable backend with Clerk, Prisma, and MongoDB to support multi-server chat, user presence, and low-latency media streaming

Activities & Awards

Motorola Scholarship – Recipient of the prestigious scholarship for academic excellence **(Fall 2024 – Present)**
Friends of Doc Schelin Scholarship – Awarded for outstanding academic achievement **(Winter 2023-Present)**
St. Thomas Aquinas College, Academic Scholarship Award – Recognized for academic excellence **(Fall 2022 – Present)**
ColorStack Member – Engaging with a community dedicated to increasing diversity in tech fields **(2023 – Present)**
Collision Conference Attendee – Networked with founders and engineers on AI, ML, and fintech trends **(Apr 2024)**