Elshadai Tegegn

Software Engineer

New York City, New York, tel: +19735835012

Email | **LinkedIn** | **Github** | **Website**

EDUCATION

BSC in Software Engineering
Addis Ababa University | AAiT | Sept 2018 - July 2023
Major GPA – 3.67/4.0

Global UGRAD scholarship program
Tennessee Tech University | Transcript | January 2022 – May 2022
Achieved top 2% Scholarship; Dean's List: ML, Algorithms, Criminology, American Government

PROFESSIONAL DEVELOPMENT, LEADERSHIP and CERTIFICATIONS

AWS ML/AI NanoDegree Scholarship Program
Udacity | Certificate | July 2023 – November 2023

Spectrum management
United Nations | Certificate
August 2023

Cornell, Maryland, Max Planck Pre-doctoral School'22
CMMRS | Certificate | 1st, August 2022 – 7th August 2022

Competitive Programming
A2SV | Aug 2021 - Present
Engaged with talented African students to tackle urgent local problems through digital solutions, achieving a 70% success rate at Google internship interviews in 2022.

Consultation and Leadership
ShARE Program | Certificate | March 2020 - Jan 2022
Served as President of ShARE AAU/AAiT 2022 Program, consulting on strategic initiatives for Axiom Financials and conducting mobility research post-COVID-19 for Valeo.

PUBLICATIONS

Bonnet, C., Luo, D., Byrne, D.,... Tegegn, E., et al. **"Jumanji: a Diverse Suite of Scalable Reinforcement Learning Environments in JAX."** ArXiv, ICLR 2024.

TECH STACK

Languages: Dart (Flutter), C++, JavaScript (NodeJS, ReactJS, ExpressJS), C# (.NetCore), Python (Django, Flask, Matplotlib, Seaborn, Pandas), Java, Kotlin
ML & DL: TensorFlow, Jax, Pytorch (Neural Networks, NLP, Deep Learning, CNN)
Front-end: HTML, CSS, Bootstrap
Database Management: Oracle, PostgreSQL, MySQL, MongoDB
Other: AWS Cloud, Docker

LANGUAGES

Amharic – Native
English – Fluent
French – Beginner
German – Beginner

AWARDS

Huawei ICT Innovation 2021, 2nd place from Ethiopia: Link

Hult Prize Regional, 2nd place winner

Ethiopian Collegiate Programming Competition, top 15% from East Africa and Arab: Link

EXTRA-CURRICULAR ACTIVITIES

Gebeya Inc – Vetting Expert

Huawei – Campus Ambassador

ITSC Inspire, GDG Addis, Women TechMakers Addis – Event Organizer

Project Chalk-the-talk – Project Coordinator

BigDream Ethiopia – Content Creator

Girls Can Code – Volunteer Coding Instructor

EXPERIENCE

Software Engineer
[Organization of Southern Corporation](#) | Remote | October 2023 – Present
- Enhanced digital access to education and research by working on the Greater South Information System (GreSIS).
- Engineered user access controls for GreSIS, bolstering security and user experience.
- Implemented social networking features for academic collaboration on the platform.

Machine Learning Research Intern
[Instadeep Ltd](#) | Remote | January 2023 – July 2023
- Engineered the implementation of a Rainbow DQN algorithm in [Mava](#), optimizing model training efficiency by 30% and enhancing multi-agent environment capabilities.
- Crafted robust reinforcement learning environments in [Jumanji](#), including a Graph Coloring environment and a Sliding Tiles Puzzle environment, which resulted in a 20% improvement in simulation fidelity and reliability across multiple testing scenarios.

Senior Backend Engineer
[Gebeya Inc.](#) | Ethiopia | March 2023 – July 2023 (Concurrent with ML Research Intern Role)
- Spearheaded the architecture and development of critical backend functionalities, comprising 48% of the system, for [Mesirat](#), a platform designed to connect 1,000 gig market service providers with top talent.
- Assembled a user authentication system by collaborating with diverse teams, bolstering platform security, and reducing unauthorized access by 85%.
- Streamlined data access by implementing an optimized caching solution, cutting data retrieval times by 40%.

Software Engineering Intern
[Amazon](#) | Germany | October 2022 – December 2022
- Worked on an end-to-end service to annotate images and browse image labels
- Implemented a frontend SPA using AWS' internal UI framework and a backend using AWS Lambda.
- Created the AWS CDK typescript code to deploy both the front-end and backend and provision additional AWS resources like connections to OpenSearch

Software Development Engineering Intern
[Audible Inc.](#), US | June 2022 – August 2022
- Spearheaded the development of payment-related features, prioritizing secure transaction environments and compliance adherence.
- Amplified user sign-ups by 16K annually through strategic full-stack feature development, blending user-friendly design with functional excellence.

Summer Geometry Initiative – Mentor/Research Intern
[MIT](#) | [Certificate](#) | US | July 2022, August 2022 and July 2023, August 2023
Merged roles of mentor and researcher, contributing to projects in computational geometry and enhancing methodologies in computer graphics.
- [How to Mend a Broken Part](#): Led as a mentor to innovate in geometric fracture assembly and formulate an evaluation metric, inspiring an open-source assembly challenge.
- [Plane and Edge Detection (RANSAC)](#): Contributed to meticulous 3D point cloud plane detection, leveraging the RANSAC algorithm for structured and precise data processing.
- Revisiting Computational Caustics: Worked with SGI Fellows, exploring differential rendering and optimal transport solutions, streamlining [reflection](#) calculations via [vectorization](#), and addressing [mesh reconstruction](#) amidst noise.
- Out-of-Context Data Augmentation for 3D Scenes

Back-end Engineer
[Eskalate](#) | US | August 2021 – May 2022
- Conducively contributed to 31% of the backend development of [HakimHub](#), playing a crucial role in the platform's developmental milestones.
- Proactively led the backend team for a week during an interim absence of the team lead, ensuring continuity and minimizing disruptions in operations.

Automation Tester and Digitization Engineer
[QualityTaskForce](#) | Poland | August 2021 – March 2022
- Executed automation testing using Selenium and Python for the [Plume](#) Mobile application, ensuring robust and reliable application performance.
- Championed the digitization of company processes, augmenting process flow speed by 21% through strategic technological interventions.

COO, Co-founder, Full-stack Engineer
[Knovuslab](#) | Ethiopia | March 2020 – PRESENT
- Pioneered the development of [Motorride](#), a ride-hailing platform mobile app, overseeing all phases from concept to deployment and contributing to mobility solutions.
- Significantly contributed to [Shega](#), Ethiopia's prominent tech news platform, ensuring the region's consistent, reliable source of tech news.
- Orchestrated the system architecture, development, and leadership of the backend team for [NileStream](#), an indigenous audio streaming platform, navigating through the challenges of the tech start-up ecosystem.