Toluwanimi Ariyo

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Education

Princeton University Princeton, NJ
B.S. in Computer Science; Minor in Statistics & Machine Learning *Expected May 2026*

- **Relevant Coursework:** Algorithms and Data Structures, Operating Systems, Machine Learning Algorithms, Computer Architecture, Advanced Programming Techniques, Distributed Systems, Human-Computer Interaction
- **Teaching Assistant Experience:** Applied Linear Algebra, Applied Physics, Applied Calculus
- **Awards & Honors:** Induction into Princeton Engineering Council (**~8** students selected) **-** 2022/2023

Experience

Datadog - AI Cloud Platform New York, NY
Software Engineer Intern *May 2025 - Aug 2025*

- (Summer 2025)

IBM - AI & Quantum Computing Research Yorktown Heights, NY
Quantum Research Intern *Sep 2024 - Nov 2024*

- Designed a protocol to perform calibrations remotely on qubits via IBM's **Qiskit** platform.
- Created a tutorial for this protocol and presented findings to the broader IBM Quantum research team. Implemented Mirror Randomized Benchmarking (**MRB**) in the Qiskit Experiments library for scalable measurement of average gate fidelities.

Microsoft - Copilot AI Business Platform Redmond, WA
Software Engineer Intern *May 2024 - Aug 2024*

- Configured a Copilot AI enabled and LLMs data trained deflection bot to handle more than **80%** of customer queries, enabling the customers to self-serve their requests faster and efficiently (**Python**).
- Created Figma mock-ups of app screens and made sample Power Apps that highlight native capabilities such as barcode/NFC reading, mixed reality, etc. (**React.js, JavaScript, HTML/CSS**).

Amazon - Supply Chain Optimization Technologies Bellevue, WA
Software Development Engineer Intern *May 2023 - Aug 2023*

- Extracted weblab info from PPDC (Promise Policy Dynamic Configuration) containing crucial Promise configurations for constraints, contribution profit, cost band, ship-option eligibility, overrides etc into AWS APP Config (**Java, Kotlin**).
- Constructed systems to deliver products to **250,000,000+** customers with approximately **9%** lower latency rate (**Java**).
- Configured large scale distributed systems systems using AWS technologies and augmented complex real time systems leveraging data from **1,000,000,000+** of orders to pioneer new scalable solutions (**Kotlin, Java**).

DestressifyAI Princeton, NJ
Founder & Chief Executive Officer *Feb 2023 - Aug 2023*

- Founded DestressifyAI, an pre-seed stage startup that innovated a product utilizing **deep reinforcement learnin**g and **hardware techniques** to actively take steps in reducing the prevalence of high blood pressure, heart disease, and strokes within our society. Developed product alongside a founding team of **5** fellow Princeton students.
- Received **~$75,000** investment funding from**~$175AUM** VC. Acquired for an undisclosed amount by Series A Startup.

National Institutes of Health - National Institute of Diabetes and Digestive and Kidney Diseases Bethesda, MD
Software Engineer Intern *June 2021 - Aug 2021*

- Constructed a computational method to mathematically model ultra-low coverage scDNA seq data of tumor cells (**Python**).
- Implemented machine learning approach to accurately detect tumor cells in ultra-low coverage single-cell DNA sequencing
- data, optimizing algorithm for approximately **98%** detection across Patient S0 and Patient S1 (**Python**).

Publications

Detecting Distracted Driving Using Computer-Vision Video-Based Analysis *May 2025*

- Russakovsky, Olga; Bogucki, Peter; Ariyo, Toluwanimi, "Detecting Distracted Driving Using Computer-Vision Video-Based Analysis" (2025). *Princeton University Department of Computer Science Journal*. 381.

Machine Learning Algorithm for Tumor Cell Detection in Single-Cell DNA Sequencing Data Feb 2022

- El-Kebir, Mohammed; Halpern Felsher, Bonnie; Ariyo, Toluwanimi, "Tumor Cell Detection in Single-Cell DNA Sequencing Data" (2022). *South Carolina Junior Academy of Sciences Journa*l. 159

Additional Information

Languages: Java, Python, JavaScript, HTML, CSS, Matlab, C#, C/C++
Developer Tools: Git, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse
Interests: Full Stack Development, Applications Programming, Statistical Analysis, Artificial Intelligence, Research, Soccer, Travel