Nasrudeen Oladimeji

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EDUCATION

UNIVERSITY OF TORONTO

ELECTRICAL & COMPUTER Engineering Major | AI & **ROBOTICS MINOR** Expected Apr 2026

Toronto, Ontario, Canada

DIVISION OF ENGINEERING SCIENCE Faculty of Applied Science and Engineering

CO-CURRICULARS

NATIONAL SOCIETY OF BLACK MECHATRONICS & MACHINE LEARNING INTERN **ENGINEERS | PRESIDENT | NSBEHACKS LEAD**

April 2024 - Present NSBEHacks: Hackathon focused on urban issues. < 200 participants.

COURSEWORK

SOFTWARE

Object Oriented Programming Data Structures & Algorithms RISC-V Assembly **SystemVerilog** Git & Github

HARDWARE

Microcontroller Design/Interfacing Digital Computer Design & Prototyping Electronic Circuit Analysis & Design

SKILLS

PROGRAMMING

Experienced:

Python • Pytorch • C++ • HTML/CSS/JavaScript

Familiar:

Java • C# • Google Apps Script • MySQL

TOOLS/APPLICATIONS

Visual Studio • AutoCAD • Fusion360 • MATLAB

OPERATING SYSTEMS

Windows • GNU • UNIX

HONOURS/AWARDS

2024 NSERC UNDERGRADUATE STUDENT RESEARCH AWARD

2024 MLH TechTogether Scholar

PAID WORK EXPERIENCE

ACCELERATION CONSORTIUM SELF-DRIVING FORMULATIONS LAB

MACHINE LEARNING ENGINEER & MECHATRONICS ENGINEER September 2024 - Present

- The Acceleration Consortium is a network of cutting-edge research labs with a government-backed grant of over half a billion dollars.
- Developed machine learning algorithms to assess soybean plant development in controlled environments using a YOLO V3 model, fine-tuning it for improved accuracy.
- Integrated META's SAM2 model to recognize and classify gel formation patterns in chemical formulations.

FRANK GU LAB & ACCELERATION CONSORTIUM

May 2024

- Proposed a machine learning pipeline using a convolutional variational autoencoder (CVAE) to optimize tool design for lab automation.
- Developed generative ML techniques for 3D modeling co-design.
- Prototyped a rainfall simulation protocol in the Opentrons OT-2
- Prototyped an automated workflow for evaluating contact lens wettability in the Opentrons OT-2

Technologies: Pytorch, Python, Opentrons OT-2

PERSONAL PROJECTS

QURANKI | FOUNDER | ~ 1000 USERS

Aug 2022

- Procedurally divided the Quran into 10,000 segments that learners would recite individually by heart.
- The prompt for each segment is a generated sequence of prior segments that are unique in the entirety of the Quran.
- Each segment has a word-by-word translation and audio to ensure students are reciting correctly.
- Beta testers have expressed how ensuring it is to know when and what to review.

Check it out here! Nasr-905/Quranki

Technologies: Python3, JavaScript, HTML, CSS, API, Apps Script, FFmpeg

DESIGN EXPERIENCE

PRAXIS I/II/III | UNIX | RAPID PROTOTYPING

Aug 2022

- Praxis III Phase II: Designing mechatronic patchouli production methods for farmers in Indonesia
- Praxis III Phase I: Designed a greenhouse prototype optimal for both plants and workers.