

Alex Uamai

Mechatronics engineer building robotic machines for food production. Incoming M.S. Robotics, Johns Hopkins.

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[Book a virtual coffee ↗](#)

Profile

I take electromechanical hardware from a blank SolidWorks file to the factory floor, validated with FEA and real testing. I've also founded and scaled a startup to a 12-person team, and I'm now teaching robots in simulation.

Experience

Unifiller Systems

Dec 2025 – Present

Mechatronics Engineering Project Leader, R&D

- Own mechanical design of an industrial robotic food-automation platform, from concept to production support
- Design end-effectors, precision assemblies and fixtures in SolidWorks with GD&T and tolerance analysis
- Validate designs with FEA and first-principles analysis, then prototype, test and iterate on hardware
- Integrate motion, sensing, pneumatics and embedded electronics; drive DFM/DFA, BOMs and change control

Grubchain

May – Dec 2025

Founder & CEO

- Founded a stablecoin payments company and grew the team from just me to 12
- Led product and engineering on a blockchain payment rail for merchants and consumers in Nigeria

Bethel Systems

Dec 2024 – Dec 2025

Technical & Business Analyst

- Turned early-stage client product ideas into engineering development plans, including support for patent applications

VMAC Air

Sep – Dec 2021

Mechanical Engineering Intern

- Designed manufacturing fixtures and production test equipment in SolidWorks

Ziva Dynamics

May – Aug 2021

Software Developer Intern

- Shipped production C++ and Python with a Qt/PySide2 interface, and contributed to Git-based automated testing

Mulgrave School

Jan – May 2021

IT Intern

- Built a Raspberry Pi remote 3D-printing system and administered Windows Active Directory

Projects

Poundo Robot

Oct 2026 – Present

- Poundo yam, a West African staple and my favourite food, takes minutes of hard turning with a wooden stick to make. I'm building a robot arm that learns that motion from video, simulating an SO-101 in MuJoCo with Jacobian IK, PD control and contact sensing

Two-wheel self-balancing robot

- Modeled dynamics and designed a state-space controller in MATLAB/Simulink, verified in Simscape 3D

Lief, foot wearable for dystonia pain

Capstone

- Led controls: PWM vibration-motor firmware, the protoboard circuit and a desktop GUI for session tracking

Embedded controllers

- STM32 tilt game controller (SPI, interrupts, USB); BLE board bring-up with J-Link; 8051 PWM motor control with encoders

Education

Johns Hopkins University

Starts Spring 2027

M.S., Robotics & Autonomous Systems Engineering

Simon Fraser University

2018 – 2023

B.A.Sc., Mechatronic Systems Engineering

Media

The fire that Web Summit Vancouver lit won't burn out Op-ed, Vancouver Tech Journal ↗ Jun 2025

Holding politicians accountable with blockchain TV guest, Channels Television ↗ Sep 2025

Skills

Robotics & sim	MuJoCo, LeRobot, SO-101, inverse kinematics, PD control, PyTorch, industrial robotics, motion control
Mechanical	SolidWorks, GD&T, tolerance analysis, FEA, DFM/DFA, drawings & BOMs, rapid prototyping
Electromech.	Actuators, sensors, pneumatics, embedded systems, PCB integration, BLE, STM32
Software	Python, C++, C, MATLAB/Simulink, Qt, Git, Linux, Jenkins, Jira, Linear, change management