

OJASVA MISHRA

AI & Robotics Engineer | Founder | Researcher

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EDUCATION

University of Florida — B.S. Computer Engineering + M.S. Finance (combined four-year pathway) **Aug 2026 – May 2030**

- Full merit scholarship · Herbert Wertheim College of Engineering.

Downingtown STEM Academy — IB Diploma **Class of 2026**

- GPA **4.45 / 4.00** weighted · SAT **1590** · National Merit Commended Scholar · IB HL: Mathematics AA, Physics, Economics, Design Technology.

EXPERIENCE

godrift.ai — AI Platform Engineer, Founding Team **2025 – Present**

Drift: Antler VC-backed AI copilot for robotics simulation (ROS2, Gazebo, MuJoCo) godrift.ai

- Founding AI engineer on the natural-language layer that lets engineers set up, debug, and run robot simulations conversationally across ROS2, Gazebo, and MuJoCo. Launched at **#5 Product of the Day** on Product Hunt; now used by **thousands of robotics engineers**.
- Built the **129-robot library catalog** behind the `/robots` CLI command, including per-entry license verification against MuJoCo Menagerie and partner repositories.
- Built an automated CLI test pipeline using pexpect-driven interaction, vision-model analysis of Gazebo screenshots, and real query sourcing from robotics forums.
- Shipped the internal EPS dashboard and regression CI tooling on a two-week cycle; contributed to Drift Desktop (Tauri + React).
- Diagnosed and fixed a production Gazebo rendering freeze traced to gz-transport UDP multicast failure on Ubuntu 24.04 with an RTX 5070.

Carnegie Mellon University, Robotics Institute — Research Intern **Jul 2025 – Present**

Advised by Prof. Min Xu and Dr. Xiaolong Wu

- **First author on two papers under review at IEEE T-RO and IROS:** discrete-time PID gain optimization under actuator saturation, and risk-limiting conformal safety filtering for attack-resilient joint control.
- Validated both methods on a **Franka Emika Panda** manipulator; developed multi-modal SLAM path planning with an integrated PID control layer for constrained motion.

Twinly, Inc. — Co-Founder & CEO **2025 – Present**

Personal AI operator for macOS · twinly.tech · Delaware C Corp Z Fellows, September 2026 Cohort

- Founded a two-person company building an AI operator that executes real computer tasks on a user's behalf, with persistent memory, a personal CRM, and a locally cloned voice.
- Architected the "Identity Runtime," composing macOS accessibility APIs, browser DOM state, application state, and vision into a single execution graph, falling back to pixel-level control only when no structured interface exists.
- Launched the public macOS app in July 2026, converting a **2,000+ person waitlist** into a 100-user private beta, a 150-member Discord, and 2,700+ TikTok followers; built on SwiftUI, Electron, Supabase, and Stripe.

EV Bots Inc. — AI Robotics Engineer Intern **Apr 2025 – Feb 2026**

Autonomous EV charging robots · multiple provisional patents

- Shipped the company's **first fully functional autonomous EV charging robot prototype**, iterating across mechanical design, electronics, and control systems ([latest prototype](#)).
- Designed CAD for an autonomous drone charging dock targeting swarm delivery fleets.

PteroLabs — Engineering Intern **Jul 2025 – Jan 2026**

Mission-grade UAV simulation

- Built a mission-grade UAV simulator in **Unreal Engine** with FPV racing, ML-driven mission planning, and object detection.
- Performance-benchmarked the simulator, now used by the **University of Pennsylvania** for active research.

iPipeline — Software Development Intern **Summer 2025**

- Built automation testing frameworks and AI-driven agents; deployed internal tooling adopted across engineering teams.

PUBLICATIONS

- [Constraint-Aware Discrete-Time PID Gain Optimization for Robotic Joint Control Under Actuator Saturation](#). First author. arXiv preprint; under review at IEEE Transactions on Robotics.
- [SCIG++: Risk-Limiting Conformal Safety Filtering for Attack-Resilient Robotic Joint Control Under Saturation](#). First author. Under review at IEEE IROS ([supplementary video](#)).
- [Introduction to Robotics and Programming](#). 120-page open-access textbook published through FusionBots; indexed on SSRN.

HACKATHONS & COMPETITIONS

- **San Francisco Hackathon** — **Winner**. Built HIVE, an AI operating system coordinating people across physical workspaces via camera input and task graphs. **2026**
- **NexHacks** — **1 of 3 high school students accepted** from 1,500+ hackers; led directly to the founding-team role at Drift. **2025**

- **Kinetix.** AI physical therapy and athletic training coach: real-time computer vision, joint-angle biomechanics, voice feedback, Meta Quest. [Demo](#). 2025
- **Startup in a Weekend Philly — Winner.** Built an interview integrity platform (GlassBoxAI) detecting AI-assisted answers live over Zoom and Google Meet via eye tracking, facial landmarks, and voice analysis. Sole high school participant among 200+ university competitors from UPenn, Drexel, and MIT. 2024

PROJECTS & VENTURES

- **Apple Swift Student Challenge — PreventaAI & Eyesight.** PreventaAI: proactive healthcare app with medication tracking, an AI assistant, and a visual scanner ([App Store](#)). Eyesight: accessibility app using LiDAR and on-device CoreML for obstacle detection and real-time narration ([TestFlight](#)). 2023 – Present
- **FusionBots — Co-Founder & CEO (nonprofit).** Robotics nonprofit serving 200+ students with a team of 18; \$6K+ revenue, affordable robotics kits, and a free 120-page robotics textbook. [fusionbots.org](#). 2022 – Present
- **QuickCitePro — Founder.** Chrome extension for academic citation workflows; adopted by professors and lab teammates. [Chrome Web Store](#). 2025 – Present

LEADERSHIP & ACTIVITIES

- **Founder & President, American Rocketry Club.** Founded and grew the club to 60+ members; leads CAD payload design, propulsion analysis, and launch operations. 2023 – Present
- **Captain & Lead Programmer, VEX Robotics.** Seven seasons of CAD, C++/Python autonomous routines, PID tuning, and modular subsystem design; multi-award competitive record. 2019 – Present
- **National Competitor, Technology Student Association.** Placed in 8 national events across AI/IoT web apps, FPV drone engineering, autonomous control systems, robotics, VR, and game design. Portfolios: [SAFMS](#) · [Drone](#) · [Eng. Design](#) · [VR](#) · [Game](#). Ongoing
- **CTO, Youth Publications & Socioeconomic Forum (UN MGCY NGO).** Led AI literacy programs across 15+ countries for 500+ members; presented at UN conferences including HLPF and UNGA. [yopsforum.org](#). 2024 – Present
- **Co-President, BattleBots Club** (combat robot drivetrain, armor, strategy) · CIO, Stocks & Investments Club (AI robo-trader on SPY ODTE options; 100+ members) · Varsity Tennis, 4 years · Chess: 1800+ ELO, 30+ USCF top-5 finishes. 2014 – Present

HONORS & AWARDS

- **Z Fellows September 2026 Cohort** (Twinly) · University of Florida full merit scholarship · National Merit Commended Scholar · College Board National Recognition.
- **TSA Nationals** placement across 8 events · CalcuSolve 1st Place Team, 2nd Place Individual · DECA and HOSA State Qualifier.

TECHNICAL SKILLS

Robotics & Control: ROS2, PID control and gain tuning under actuator saturation, SLAM, odometry, path planning, safety filtering, VEX, Arduino, UAV/Betaflight

Simulation: Gazebo, MuJoCo, Ignition, Unreal Engine, Unity

Languages: C++, Python, Swift, C#, JavaScript/TypeScript

AI/ML: LLMs and agentic systems, computer vision, multimodal models, reinforcement learning, CoreML, Azure OpenAI

Tools & CAD: Linux/Ubuntu, Git, Tauri, React, SwiftUI, Electron, Firebase, Supabase, Fusion 360, OnShape, AutoCAD, Blender, RockSim, 3D printing