Elvyn Cachapero

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EDUCATION

Louisiana State University (LSU), Baton Rouge, LA   **May 2025**

Bachelor of Science, Computer Engineering

Related Coursework: Digital Logic, Electronics, Circuits, PLC, C++, MIPS Assembly, ARM Assembly, Verilog, Microprocessors, PSPICE/MATLAB, Signals & Systems, Computer Networking, Operating Systems, Data Structures, Computer Organization & Architecture, Communications in Computing

EXPERIENCE

Personal Technical Projects   **July 2019 – Present**

Self-Initiated Projects & Enthusiast Work

· Built SEO Optimizer Web App, a browser-based tool for website SEO analysis and improvement, featuring keyword extraction, meta tag auditing, and real-time content suggestions (Go, React).

· Developed a self-hosted portfolio website using Go, Git, Docker, and Nginx, showcasing embedded systems, self-hosting infrastructure, and robotics projects.

· Created and maintained a personal homelab using Proxmox and Docker, hosting services such as Pi-hole, WireGuard VPN, Nginx Reverse Proxy Manager, Jellyfin, and Samba file shares.

· Deployed and managed network/system administration tools (firewall, reverse proxy, service automation), enforcing network segmentation and security best practices.

Multi-Terrain Drone Team   **Aug 2024 – May 2025**

Team Lead – Payload Delivery Drone Project

· Led a multidisciplinary team developing a multi-terrain autonomous delivery drone with ML integration, meeting sponsor requirements.

· Architected system design and selected hardware, balancing power and compatibility constraints.

· Wrote autonomous control scripts in Python using MAVLink protocol for Pixhawk flight controller.

· Implemented a real-time object detection via custom-trained YOLO11 model on OAK-D S2 AI camera; trained model on 1,000+ annotated images using Roboflow and Python.

· Executed structured validation testing for flight behavior, object detection accuracy, and communication range.

· Diagnosed/resolved power distribution and EMI issues to ensure stable sensor and peripheral operation.

· Managed project documentation, regression testing cycles, and design reviews to meet scheduled project milestones.

Software Technical Support   **May 2020 – Feb 2023**

Remote Technical Support Specialist – What Bot Industries

· Provided responsive and professional support to customers via email and Slack, resolving technical issues and user inquiries.

· Collaborated with developers to report and troubleshoot software bugs, contributing to consistent product improvement.

· Performed functional testing and feedback loops for new feature rollouts and software patches.

· Maintained strong working relationships with clients and partners to support long-term satisfaction and product loyalty.

· Operated independently with minimal supervision, managing workload and prioritizing issues in a remote-first environment.

SKILLS & ACTIVITIES

Programming Languages: C++, Python, Go, Java, Verilog, MIPS, Arm Assembly, PLC

Frontend Development: JavaScript, HTML, CSS, Web Scraping / Parsing

Tools: Xilinx Vivado, PSPICE, Matlab, Keil uVision, LogixPro500, Microsoft Office, Git

Hardware: Soldering, Oscilloscope use, PCB diagnostics, Circuit analysis, Multimeter

Activities: UVSA GC Summit III Family Leader, Repairing/modding personal electronics, Home automation