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/ARM Assembly, Verilog, Microprocessors, PSPICE/MATLAB, Signals & Systems, Computer Networking, Operating Systems, Data Structures, Computer Organization & Architecture, Communications in Computing

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EXPERIENCE

Ivy Technology   **Aug 2025 – Sept 2025**

Electro-Mechanical Technician – Robotics Installment & Deployment

· Assembled and installed automated robotic equipment and material handling systems (MHE) within a high-throughput e-commerce facility (Amazon)
· Followed detailed mechanical / electrical schematics and installation procedures to ensure accurate build and system alignment
· Collaborate with cross-functional teams to resolve electrical / mechanical faults under tight operational timelines
· Enforced and adhered to strict safety protocols while working with live machinery and during system power-up
· Supported site readiness by preparing, staging, and verifying components during the robotics deployment phase

LSU Capstone Design Competition   **Aug 2024 – May 2025**

Team Lead – Multi-Terrain Drone w/ Object Detection

· Led multidisciplinary team through full system design and development of a multi-terrain autonomous delivery drone with ML integration, meeting sponsor constraints
· Developed autonomous control scripts for seamless integration (**Python, MAVLink, RPi**)
· Implemented real-time object detection via custom-trained model; trained model on 1,000+ annotated images (**Python, YOLO11, RPi, Roboflow**)
· Constructed validation testing for flight behavior, object detection accuracy, wireless communication range, power consumption/distribution, electromagnetic interference (EMI)
· Managed project documentation, testing cycles, and design reviews to meet scheduled project milestones / presentations

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Projects

Personal / Self-Initiated Technical Projects

· Developed SEO Optimizer Web App, provides SEO analysis (keyword extraction, meta tags, headlines, etc.) and real-time content suggestions (**Go, Gin, React, TypeScript, CSS, Docker**)
· Created and maintained a personal homelab using Proxmox and Docker, self-hosting services (**Pi-hole, WireGuard, Nginx Reverse Proxy Manager, Jellyfin, Samba file shares, NAS**)
· Developed a portfolio website showcasing embedded systems, self-hosting infrastructure, robotics, and machine learning projects (**Go, HTML, CSS, JavaScript, Docker**)
· Deployed and managed network/system administration tools (firewall, reverse proxy, service automation), enforcing network segmentation and security
· Developed riftbound-advisor to evaluate game state and decision support using structured data models and heuristic scoring logic (**Python, Pydantic, SQLite, Object-Orientated Program (OOP) Design**)

SKILLS

Programming Languages: C++, Python, Go, Java, Verilog, MIPS, Arm Assembly, PLC
Frontend Development: JavaScript, HTML, CSS
Tools: Xilinx Vivado, PSPICE, Matlab, Keil uVision, LogixPro500, Microsoft Office, Git, Autodesk
Misc: Soldering, Oscilloscopes, PCB diagnostics, Circuit analysis, Multimeter, OSHA 30-hour certification