

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

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, YOLOv11, 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 [giffbound-advisor](#) to evaluate game state and decision support using structured data models and heuristic scoring logic (**Python, Pydantic, FastAPI, 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