## **Felix Vujasin**

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## **Internship Vision 2026**

I'm seeking a summer internship where I can apply my experience in full-stack development and DevOps while growing under professional mentorship. I aim to contribute to impactful projects that involve containerized application deployment, cloud infrastructure, and automation, especially those leveraging AI/ML to solve real-world problems. I'm eager to gain hands-on experience with enterprise development workflows, DevOps pipelines, and industry best practices for system security, reliability, and scalability. This opportunity would complement my self-directed learning and prepare me for future studies in computer science at institutions like the University of Illinois Urbana-Champaign or Northwestern University.

## **Education**

Incoming Transfer Student - August 2025

**Loyola Academy, Wilmette, IL** - Junior/Senior High School Student, Class of 2027

August 2023 - June 2025

Wolcott College Prep, Chicago, IL - Freshman/Sophomore High School Student, Class of 2027 (3.92/4.00)

Demonstrated proficiency by passing both AP Computer Science Principles and AP Computer
 Science A exams without taking the formal courses.

## **Technical Skills**

Programming Languages:

Proficient: Python, TypeScript (Javascript)

• Intermediate: Rust, Java

Familiar: C++, Swift, HTML/CSS

#### Technologies & Infrastructure:

- Web Development: CSS, Fastify, GitHub Pages
- DevOps & Cloud: Docker, K3s, Argo CD, Jenkins, HashiCorp Vault
- Networking: Experienced with Cloudflare services including DNS, Zero Trust, Tunnels, WAF, and
  webhook integrations. Comfortable configuring legacy networking gear (routers, switches, firewalls)
  via CLI and web UI. Skilled in building networked applications using TCP, UDP, HTTP/S, and
  WebSockets. Proficient in designing and debugging custom protocols with a focus on performance
  and reliability.
- Systems: NixOS (Daily driver), Self-managed K3s cluster, Linux administration
- AI & ML: OpenCV, Stable Baselines3, Ollama integration

- Embedded/IoT: ESP8266, Arduino, Bluetooth interfacing
- Automation: Selenium, BeautifulSoup, WebSocket API integration

## **Work Experience**

July 2025 - PRESENT

## Audi Exchange, Highland Park, IL - IT Assistant

- Worked with DMS systems (CDK) to manage entitlements and enroll new computers in 365 for the Audi, Porsche and Chevy Exchange
- Managed and maintained industrial networking equipment
- Solved common CDK config file errors by writing programs to replace corrupted files
- Migrated all computers to windows 11 by replacing or upgrading old computers.

## **Technical Projects**

#### Infrastructure

## Self Hosted K3s Cluster

#### Home K3s cluster with a assortment of nodes

- Designed and maintained self-hosted K3s cluster running on server hardware (Dell PowerEdge R630, R730xd, Lenovo ThinkCentre, old laptops, etc)
- Experienced with reverse proxy setups using Cloudflare for main ingress and FRP, with the FRPS server hosted on Google Cloud and the cluster running an FRPC client to establish reverse UDP tunnels for internal game services
- Established monitoring and logging systems for cluster health and application performance using Prometheus as a daemon set and Graphana to display the information

### Automated CI/CD Workflows

 Implemented containerized application deployments with automated CI/CD workflows using Nix, Github actions and Argo Workflows

## **Applications**

## All Application projects can be run with Nix using nix run github: < GitHub URL>.

## felixhub.dev

Full- stack Personal Portfolio & Service Platform

- Designed and implemented a personal portfolio website with full-stack functionality
- Built and deployed on a self-managed NixOS K3s cluster with Cloudfire integration
- Developed custom AI chat UI with backend API support (Deprecated using openUI now)
- Implemented secure CI/CD pipeline for automated deployments

## Just Another Kahoot Bot

#### WebSocket API Integration & Automation

- Reverse-engineered Kahoot's WebSocket API to develop a production-grade automation tool
- Created an efficient bot framework demonstrating API integration, networking, and real-time data handling
- Implemented secure authentication mechanisms and session management

#### **Krousinator**

Cross-Platform Command & Control (C2) Infrastructure for Ethical Malware Research

- Built in Rust for safety, performance, and cross-compilation across Linux, Windows, and macOS, this modular malware framework demonstrates the simplicity and risks of modern botnet creation
- Implements a WebSocket-based, bi-directional communication channel using asynchronous, event-driven architecture for real-time server-bot interaction
- Designed as an educational tool to highlight malware proliferation, security vulnerabilities, and the importance of secure software design
- Emphasizes ethical hacking and reverse engineering while showcasing a Command & Control (C2) infrastructure in a research-focused context

**Warning**: Only use the Krousinator in an isolated environment (i.e., a virtual machine). It is dangerous and nearly impossible to remove if installed. You must build it from source - see the <u>README.md</u> in the <u>Krousinator GitHub repository</u> for instructions.

## Wireless RC Car Control

RC Car Controlled by Steam Deck (or any controller that SDL2 can recognize)

- Developed firmware in C++ for the ESP8266 microcontroller to control RC car servos and ESC
- Created a Rust-based interface for Steam Deck to wirelessly communicate with the RC car
- Implemented a custom radio communication protocol for reliable remote control

# **OpenSource Contributions**



Lua package manager written in Rust