

Sirish Gurung

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EDUCATION

Florida Polytechnic University

Lakeland, FL

Bachelor of Science in Computer Science

May. 2027

- **GPA: 4.00/4.00** | **Concentration:** Software Engineering and Machine Learning
- **Relevant Coursework:** Algorithm Design, Machine Learning, Computer Networks, Database Systems, System Analysis and Design, Computer Architecture, Applied Deep Learning, Secure Software Engineering

TECHNICAL SKILLS

Languages and Databases: Python, Rust, C++, C, JavaScript, TypeScript, PHP, SQL, MongoDB, PostgreSQL, Neon

Frameworks: React, Astro, Streamlit, Next.js, Node.js, FastAPI, TensorFlow, Pytorch, OpenCV

Developer Tools: Git, Docker, Kubernetes, AWS, Terraform, Helm, Linux, Nginx

EXPERIENCE

Full-Stack Developer Intern

June 2026 – Aug. 2026

Everglades Financial

Lakeland, FL

- Architected core SaaS features using React, Next.js, and TypeScript, collaborating with cross-functional teams to deliver high-throughput web applications.
- Engineered scalable RESTful APIs and optimized SQL query pipelines, reducing backend response times by 35% and accelerating data retrieval across 10,000+ transaction records.
- Containerized CI/CD pipelines using Docker and integrated Auth0 RBAC, boosting test coverage by 25% and slashing production deployment cycles to under 15 minutes.

IT Student Worker

Feb. 2026 – Present

Florida Polytechnic University

Lakeland, FL

- Managed end-to-end IT service requests and incident resolution via Jira Service Desk, delivering Tier-1/2 hardware, software, and network support for 1,200+ campus endpoints across Windows and macOS.
- Automated machine-wide silent deployments and system configuration scripts utilizing PowerShell App Deployment Toolkit (PSADT), cutting software rollout turnaround times by 40% across campus labs.
- Diagnosed and resolved critical TCP/IP, DNS/DHCP, and active directory network connectivity anomalies, maintaining a 98% first-touch resolution rate and slashing average ticket turnaround to under 2 hours.

Peer Learning Strategist

Jan. 2025 – Feb. 2026

Florida Polytechnic University

United States

- Partnered closely with faculty and department leads to design curriculum study guides, interactive visual slide decks, and exam prep modules supporting 150+ STEM undergraduate students.
- Facilitated weekly peer-led review workshops and collaborative problem-solving breakout sessions, driving a 20% average improvement in student exam performance and comprehension scores.
- Gathered continuous feedback and iterated on teaching methods, attaining a 92% student satisfaction rating and increasing active workshop attendance by 30% semester-over-semester.

Teaching Assistant

Aug. 2025 – May 2026

Florida Polytechnic University

United States

- Evaluated coursework, programming assignments, and laboratory submissions for 80+ students per semester, delivering detailed code reviews and constructive feedback rubrics.
- Conducted 6+ weekly 1-on-1 and small-group office hour sessions to deconstruct intricate computer science theory, algorithms, and debugging methodologies, leading to a 15% average grade increase.
- Collaborated with the lead professor to modernize rubric grading standards and streamline grading workflows, cutting assessment turnaround time by 30% while boosting evaluation consistency.

PROJECTS

Production-Ready AWS EKS Infrastructure | *Terraform, AWS, Kubernetes, Helm*

- Provisioned a highly available Amazon EKS cluster (v1.36) and custom VPC network architecture using Terraform, configuring IAM Roles for Service Accounts (IRSA) and RBAC for secure access management.
- Orchestrated critical Kubernetes add-ons via Helm, including the AWS Load Balancer Controller, NGINX Ingress, and Cert-Manager to automate TLS certificates and dynamic ALB/NLB traffic routing.
- Integrated EBS/EFS CSI drivers for stateful persistent storage and developed a streamlined deployment script to build and push multi-architecture (amd64/arm64) Docker container workloads.

PolyTrack | *React, FastAPI, AWS EC2, PostGIS, IoT, Docker*

- Engineered a real-time microtransit telemetry platform using FastAPI and React, achieving sub-second update latency via WebSockets and custom frontend dead-reckoning interpolation.
- Developed a low-power IoT tracking node with Arduino and SIM7000A, optimizing telemetry transmission via raw TCP sockets to bypass SSL overhead and ensure resilient cellular data ingestion.
- Deployed a containerized microservices architecture on an AWS EC2 instance using PostGIS for spatial routing, integrating AWS Bedrock and Ollama LLMs to power an AI-driven fleet analytics dashboard.

Rust-Based Operating System Kernel | *Rust*

- Implemented an OS kernel in Rust, including a Global Descriptor Table (GDT) and Interrupt Descriptor Table (IDT) to handle double faults and direct hardware interrupts in a no_std environment.
- Designed a robust memory management subsystem, enabling dynamic memory allocation through 4-level paging and a custom heap allocator to manage system resources efficiently.
- Developed an asynchronous task executor, integrating a flicker-free VGA text mode driver and a memory-resident text editor that processes raw keyboard scancodes via hardware interrupts.

Autonomous Game Agent | *Python, OpenCV, Pytorch, SB3, Gymnasium, Docker*

- Engineered an autonomous agent using Proximal Policy Optimization (PPO) and Stable Baselines3 with custom CNN architecture to master a physics-based Android game - BenjiBanas.
- Developed a high-performance custom Gymnasium environment that interfaces with live Android devices via ADB and Scrcpy.
- Built a robust Computer Vision pipeline using OpenCV to extract game state, utilizing OCR for score tracking and template matching for menu navigation from raw 30 FPS video streams.

PolyChat | *React, Express.js, Tailwind, Node.js, MongoDB, Stream SDK, Docker, Ollama, Nginx*

- Architected a full-stack language learning platform using React, Node.js, and Stream Chat, featuring real-time messaging and an integrated AI tutor powered by Llama 3.2.
- Built a production-grade authentication system implementing JWT via HTTP-only cookies and Cloudflare Turnstile for bot protection, including Resend for transactional emails.
- Designed and deployed a secure microservices architecture on AWS EC2, utilizing Docker for containerization and Nginx as a reverse proxy, to enforce API key authentication and rate-limiting.

EXTRACURRICULAR ACTIVITIES

Cybersecurity Club Member

Aug. 2024 – Aug. 2025

- Competed in CTF events, applying skills in web exploitation, cryptography, and digital forensics to solve security challenges.

Google Developers Group Member

Aug. 2025 – Present

- Engaging in technical sessions to explore LLM capabilities and build GenAI applications using Google Cloud tools and the Gemini API.