

# Rahul Moka

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## EDUCATION

### Bachelors in Computer Science

University of Memphis  
– Dean's List

**Permanent Resident**

Memphis, TN  
Aug. 2023 – May 2027

## EXPERIENCE

### Software Engineer Intern – Triad Tech

May-Jul 2026

Reference: [matt@triad.tech](mailto:matt@triad.tech), linkedin

- Developed and integrated an internal project organization system using **Ruby on Rails** and **React**, managing **7 projects** for **4 clients** and centralizing information on the 'Cork-Board' platform.
- Automated internal workflows using **MCP server**, leading to an estimated **30%** increase in team efficiency for project management and client interactions.
- Engineered a **Raspberry Pi 5** to send requests to an Oat Foundry Board via **Split-Flap API** in order to create a faster method of displaying on the board for the client, containerized the code via **Docker** to run on boot and connected **Claude** via **SSH** in order to make code edits with agents remotely

### Software Engineer Intern – West TN Consulting

Jan. 2025 – Present

Reference: [miclaineffeler@westtn.consulting](mailto:miclaineffeler@westtn.consulting), linkedin

- Automated contract generation for **30+ clients** via a **Next.js, React, and Node.js** pipeline, saving 30 minutes per contract by parsing form state into server-side templates and PDFs.
- Refactored and improved a complex React code-base by fixing **20 critical bugs** and addressing performance issues in a challenging, unorganized project.

## PROJECTS

### SDXL Cyberpunk-Style Image-Gen LoRA Fine-Tune | *hf-model* | *sdxl-repo*

Jul. 2026

- Fine-tuned **Stable Diffusion XL** via **LoRA (Diffusers, PEFT)** to specialize image generation toward a custom visual style, training a low-rank adapter on the UNet rather than the full **2.6B+ parameter model**
- Engineered a memory-constrained training pipeline in **PyTorch** and **Accelerate** (bf16 mixed precision, gradient checkpointing, 8-bit Adam via **bitsandbytes**, gradient accumulation) that fit entirely on a single consumer 8GB GPU
- Built the end-to-end pipeline from scratch: dataset curation/preprocessing with **Hugging Face Datasets**, checkpoint-based overfitting analysis across training runs, and a CLI plus **Gradio** web app for inference

### Remote Dev & Personal Automation System (Raspberry Pi) | *Rahul/wol-trigger*

Jul. 2026

- Built a **C++** remote development system using **Boost.Asio** and **PTY/ConPTY** to expose a live terminal session on a home machine, controllable from anywhere via a **Raspberry Pi** acting as an always-on gateway.
- Configured **Wake-on-LAN** and an **iOS Shortcut** to remotely power on the home PC from sleep, then connected via **Termius** over **SSH** to establish a terminal session directly from an iPhone, including launching **Claude Code** to work on projects remotely.
- Integrated the **Apple Watch (HealthKit) API** to continuously log heart rate and calories burned, and the **Canvas LMS API** to automatically verify assignment submission status and retrieve turned-in files.
- Integrated **Claude API** to programmatically compare submitted assignment files against instructor-provided directions, flagging missing or incomplete requirements before grading.

### Hack Memphis – Civic Source (AI Procurement Platform) | *Rahul/CivicSource*

Nov. 2025

- Architected a sophisticated AI procurement platform utilizing **React.js**, **Tailwind CSS**, **PostgreSQL**, and **Claude API**, designed to link Memphis authorities with **20,000+ small businesses** and expanding local business contract win rate by **12%**.
- Designed to reduce outsourcing of city contracts to support local small businesses, addressing the **\$41 million** that leaves the Memphis community annually.
- Engineered the back-end interface with **Flask** and **Google Places API**, and **Yelp API**, ensuring an intuitive user experience, completed in 18 hours with a 4-person team under a strict 24-hour deadline.

## TECHNICAL SKILLS

**Programming Languages:** C++, Ruby, Java, Python, JavaScript, HTML, CSS

**Web Development:** AWS, RESTful APIs, Responsive Design, UI Development, Front-End Development, Back-End Development, Single Page Applications, Serverless Architecture

**Libraries & Frameworks:** PyTorch, React.js, Node.js, Django, Flask, Ruby on Rails, Pandas, NumPy, Pygame, Celery

**Developer Tools:** Git, VS Code, Cursor, GitHub Copilot