

# MANNAN SHUKLA

Robbinsville, NJ

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## TECHNICAL SKILLS

**Languages/Frameworks:** Java, Python, C, FastAPI, MongoDB, SQL, pytorch, ollama, llama.cpp, ROS, whisper, llama3, Langchain, ChromaDB, REST API, edge-tts, RVC, JavaScript, React, unsloth, pypdf, Google Sheets API, Stripe API, Bootstrap, CSS Grid, CSS Flexbox

**Developer Tools:** Git, Docker, Linux, AWS, Firebase, vim, Agile, Huggingface

## EXPERIENCE

### Research Assistant

April 2024 - Present

AIOS - Rutgers University

New Brunswick, NJ

- With a lab developing an **AI agent framework** and an **AI agent operating system**
- Developing **shell interface** for agent interaction with GUI to follow
- Leading **human computer + agent interaction research**, investigating non chatbot interfaces for agent interaction

### Software Engineer

June 2024 - Present

Valari Robotics LLC

Ponte Vedra Beach, FL

- With development team for AI enabled software for a restaurant robot with host and bussing capability
- Creating host functionality using **edge-tts with RVC, whisper, and llama3** to interact with users with all compute running locally
- Finetuned llama3 on restaurant host training manuals using **unsloth** to ensure expertise and context awareness
- Using ROS (Robot Operating System) movement API to control robot placement when leading customers to tables

### IT Intern

July 2023 - December 2023

American Louvered Roof | <https://americanlouveredroof.com>

Trenton, NJ

- Established digital presence by developing website deployed on **Google Firebase**
- Managed all company servers, domains, email addresses, VoIP, and digital accounting overseeing thousands of dollars
- Fostered relationship with 3 major clients resulting in **current sales over \$30,000**

### Student Design Researcher

June 2023

Innovation, Design, and Enterprenuership Academy at Rutgers

New Brunswick, NJ

- Developed **Full Stack Volunteer Management System** for non-profits with team of 5 design researchers in a 5 week program at Rutgers
- Designed intuitive **React** frontend powered by **REST APIs** served with **FastAPI** backend
- Implemented **pypdf** to streamline and automate form writing and recordkeeping, synced via **Google Sheets API**

## LEADERSHIP

### President

September 2023 - Present

Rutgers University Student Linux User's Group (RUSLUG) | <https://ruslug.org>

New Brunswick, NJ

- Relaunched club following **12 year gap**, developed constitution, recruited 20 members, and launched website
- Project Manager and Developer for the Bus Signboard project, developing an e-ink device to show Rutgers bus schedules at stops
- Spearheaded collaboration with other CS organizations at Rutgers and other Linux User Groups across the country

### Founder

January 2024 - Present

Jersey Film Company | <https://jerseyfilmco.org>

Robbinsville, NJ

- Founded brand with 4 investors to sell Kodak color positive film at NJ film labs and direct to consumer online
- Used **Figma** to design a **direct to consumer online storefront** and film labels
- Created online storefront using **css grid and flexbox** with a **FastAPI** backend with **Stripe** integration coming

## PROJECTS

**internetfriend** | [Discord.py](#), [ollama](#), [llama3](#)

2024

- Developing a **context aware** uncensored discord chatbot with **llama3** and **ollama-serve** running locally
- **Finetuned** uncensored model using unsloth on scraped discord conversations for added realism and awareness
- Used PubMed API to pull relavent research papers based on keywords that appear in conversation and post at random intervals

**openview** | [FastAPI](#), [Jinja2](#), [ChromaDB](#), [CSS Grid](#)

2024

- Developed full-stack web app for viewing personal photography portfolio using **FastAPI** serving **REST API** with **CSS Grid** frontend
- Added support for tagging, albums, downloading via an optional CLI friendly interface, and displaying EXIF data
- Employed ChromaDB and Huggingface embedding model to add **semantic search** for images

## EDUCATION

**Rutgers University - New Brunswick**

GPA - 3.5

Bachelor of Science - Computer Science

2022 - 2025

- Systems Programming, Algorithms, Intro to AI, Intro to Data Science, Intro to Computational Robotics