

MANNAN SHUKLA

Robbinsville, NJ

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EDUCATION

Rutgers University - New Brunswick

Bachelor of Science - Computer Science

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

GPA - 3.5

2022 - 2025

EXPERIENCE

Research Assistant

AIOS - Rutgers University

- On a team developing an AI agent framework and an AI agent operating system
- Developing shell interface for agent interaction with GUI coming soon
- Leading human computer + agent interaction research, investigating non chatbot interfaces for agent interaction

April 2024 - Present

New Brunswick, NJ

Developer

Valari Robotics LLC

- On a team developing 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

June 2024 - Present

Ponte Vedra Beach, FL

Developer

American Louvered Roof

- Brought web presence from 0 developing website deployed on **Google Firebase** (<https://americanlouveredroof.com>)
- 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**

July 2023 - December 2023

Trenton, NJ

Student Design Researcher

Innovation, Design, and Entrepreneurship Academy at Rutgers

- 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**

June 2023

New Brunswick, NJ

LEADERSHIP

President

Rutgers University Student Linux User's Group (RUSLUG)

- Relaunched club following 12 year gap, developed constitution, recruited 20 members, and launched website (<https://ruslug.org>)
- Project Manager and Developer for the Bus Signboard project, developing an e-ink device to show Rutgers bus schedules at stops
- Responsible for outreach, collaboration with other clubs at RU, and joint events with other Student Linux User Groups

September 2023 - Present

New Brunswick, NJ

Founder

Jersey Film Company

- 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 (<https://jerseyfilmco.org>) using **css grid and flexbox** with a **FastAPI** backend with Stripe integration coming

January 2024 - Present

Robbinsville, NJ

PROJECTS

internetfriend | *Discord.py, ollama, llama3*

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

2024

openview | *FastAPI, Jinja2, ChromaDB, CSS Grid*

- 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

2024

clapmaster | *Python, Raspberry Pi, OpenCV*

- Designed rhythm game for **Raspberry Pi** - a motor generates a randomly generated vibration beat, users must repeat the beat with claps
- Utilized **computer vision** to detect hand placement and claps
- Devised algorithm to generate beat patterns with increasing difficulty

2023

TECHNICAL SKILLS

Languages/Frameworks: Java, Python, C, FastAPI, MongoDB, pytorch, ollama, llama.cpp, ROS, whisper, llama3, Langchain, ChromaDB

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