

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

Other: Git, Docker, Linux, AWS, Firebase, vim, Agile, Huggingface, Salesforce

EXPERIENCE

Research Assistant

April 2024 - Present

agiresearch - Rutgers University

New Brunswick, NJ

- Designed **CLI interface** for agent interaction and implemented agent recommender system
- Investigated and integrated **Large Language Model (LLM) agents** into workflows for automated task execution
- Explored opportunities for automatic agentic workflows to enhance efficiency in human application interactions
- Using Linux telemetry data and **Sequence Pattern Mining** to predict user behavior to inform agent recommender development

Software Engineer

June 2024 - September 2024

Valari Robotics LLC

Ponte Vedra Beach, FL

- Created host functionality for restaurant robot using **RVC, whisper, and llama3** to interact with users with private compute
- Finetuned llama3 on restaurant host training manuals and menu using **unsloth** to ensure expertise and context awareness
- Developed REST API for CRUD operations with **SQLAlchemy, SQLite, and FastAPI** for quick data retrieval and queue management
- Used 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 **50 members**, and launched website
- Project Manager and Developer for the Bus Signboard project, developing an open source e-ink device to show bus ETAs at stops
- Gave a talk to 100+ people introducing the Free Software Philosophy to the Rutgers CS Community

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 other digital marketing assets
- Developed online storefront using **CSS Grid and Flexbox** with **FastAPI** backend and **Stripe** integration

PROJECTS

internetfriend | [Discord.py](https://discord.py), [ollama](https://ollama.com), [llama3](https://llama.com)

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 relevant research papers based on keywords that appear in conversation and post at random intervals

openview | [FastAPI](https://fastapi.com), [Jinja2](https://jinja2.org), [ChromaDB](https://chromadb.com), [CSS Grid](https://cssgrid.com)

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

September 2022 - May 2025

- Coursework: Systems Programming, Computer Architecture, Algorithms, Machine Learning Principles