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