Akshay Mysore

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EDUCATION

Western University - Computer Science — Graduation Date: April 2027

- GPA: 3.81/4.00

EXPERIENCE

Blanc AI - Co-Founder — Aug 2024 - Present

- Co-developed an agentic algorithm using llms which is most suitable for creating enterprise software.
- Received $125,000 in credits in various companies including Azure, Stripe and more from Microsoft for startups.
- Skilled in managing large scale systems across diverse tech stacks to optimize client operations.
- Selected as Ripple Ventures Fellow W “25, Youngest Western Accelerator Fellow W “25 by Morrissette Institute.

Mustang Capital – Quantitative Analyst — Sept 2024 - Present

- Identified and capitalized on positive arbitrage opportunities between primary and alternate markets
- Co-led a team to automate betting processes by developing algorithms to identify and execute arbitrage opportunities, increasing efficiency by 40%.

Infin8 – Software Engineer — April 2024 – Aug 2024

- Developed REST APIs to handle ERP business logic, optimizing queries to reduce response times by 35%.
- Implemented Redis caching and built a comprehensive test suite achieving 70% code coverage for backend services

Undergraduate Research Assistant — Jan 2024 – Aug 2024

- Assisted in processing 10,000+ spike-train recordings to study neural activity patterns in rodent brain data.
- Contributed to optimizations in data pipelines to improve signal processing efficiency by 7%.
- Collaborated with researchers to detect neural coding patterns, supporting ongoing neuroscience research.

Rothsen Financial Project - Chief Executive Officer — Sept 2023 – June 2024

- Led a team of 12 students to develop and implement programs tailored for high school students
- Secured $10,000 in sponsorships and grants from businesses and educational institutions.

PROJECTS

Personal AI (Tess) *OpenAI, Ollama, Swarm, torch, selenium, LM Studio*

- Implemented OpenAI’s TTS model for realistic speech, enabling verbal interaction with the assistant.
- Designed an agentic architecture for Tess, supporting long-term (Pinecone) and short-term memory with inter-agent communication with async tasks through thought agent which runs through past conversations.
- Enabled web search capabilities using Selenium, allowing for real-time data to inform assistant responses.
- Allowed for semi-control over desktop for pulling up files, websites and or other queries

Natural Selection Simulation *TensorFlow, torch*

- Developed a simulation with 8+ clans, using libido and animosity metrics for repopulation and battles.
- Managed 200+ AI agents balancing hunger and thirst for resource-seeking behaviors.
- Observed emergent behaviors after 1 hour of learning, leading to natural groupings around enemies.

Malloc Manager *from scratch*

- Developed a Malloc Manager that allocates 1MB memory blocks, divided into 128 fixed-size blocks for efficient memory usage.
- Reduced memory fragmentation by 9% through optimized block allocation and reuse.
- Achieved performance improvement, handling 50,000+ allocation/deallocation requests per second.
- Designed for applications requiring low-overhead memory management and frequent small allocations.

Ray Tracing Engine *from scratch*

- Developed a Java-based ray tracer from scratch, casting up to 50 rays per pixel to simulate basic light behavior.
- Implemented intersection calculations for spheres and planes, supporting up to 10 objects in a scene.
- Added basic reflection and refraction features to handle light interactions between objects.
- Achieved performance optimization with multi-threading, rendering simple 1920x1080 scenes in under 10 seconds.

Malaria Detection Application *TensorFlow, Flask, Fast API*

- Trained a Malaria detection model on 30,000 images (TFDS), ensuring coverage of diverse cases.
- The model achieves a commendable accuracy of approximately 94.27% in diagnosing malaria.
- Implemented a GUI interface to allow for smooth interaction to test the model.

Robotic Mimic Arm *TensorFlow, cv2*

- Designed and executed "Mimic Arm" project, leveraging 3D printing, the OpenCV (cv2) library, and a TensorFlow model on hand movement. Implemented SSH communication to control a robotic hand based on real-time movements captured through a camera controlled by a Raspberry Pi for movement.