Aayush Srivastava

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EDUCATION

University of Texas at Dallas — Richardson, TX
Bachelor of Science in Computer Science — *May 2028*

    Relevant Coursework: Fundamentals of Computer Science, Calculus I, Computer Science I, Discrete Mathematics for Computing

EXPERIENCE

ACM Projects – UTD Chatbot — *React Native, NGROK, MongoDB, OpenAI* — Aug. 2024 – Nov. 2024
University of Texas at Dallas — *Richardson, TX*

- Led front-end development for three core features—Community hub, Chatbot interface, and "Post an Issue" flow—using React Native on a MERN stack. Drove the project from wireframes to a working MVP in a 10-week cycle, collaborating with a five-member team and conducting weekly team meetings.
- Community page: built a responsive feed that pulls discussion threads, supports tag-based search, and lets students up-vote / comment on peer solutions.
- Post an Issue page: designed a form that lets users attach screenshots and automatically opens a new thread in the Community collection.
- Created a conversational UI that streams responses from an OpenAI endpoint, hooked into Clerk so only authenticated UTD users can access real-time help.

ACM Research – AstroVision — *Python, PyTorch, NumPy, Matplotlib* — Jan. 2025 – Present
University of Texas at Dallas — *Richardson, TX*

- Fine-tuned a MobileNetV2 transfer-learning model to recognise four celestial object classes, pushing validation accuracy from 84 % to 94 % while freezing all base weights.
- Expanded a modest dataset 10 × with on-the-fly augmentation—random rotations, zoom, shear, flips—raising baseline accuracy by 10 p.p. and curbing over-fitting on the small space-image corpus.
- Achieved a lightweight 10 MB model that nearly matches Heira Transformer accuracy while delivering markedly faster inference.
- Automated evaluation dashboards—confusion-matrix heat-maps, learning-curve plots.

PROJECTS

AI Customer Support Bot | *Next.js, Node.js, Material UI, Gemini API*

- Built an end-to-end customer service app using Next.js 14 App Router,connected to Google Generative AI "Gemini 1.5 Flash" so Headstarter users get on-demand answers about onboarding, interview prep and billing.
- Built an API endpoint that wraps Gemini chat in a ReadableStream, streams partial tokens, and enforces a 500-token cap.
- With React hooks and MUI: optimistic rendering, live TextDecoder updates, autoscroll, and colour-coded bubbles so users see the bot "typing".

Inventory Management | *Next.js, Node.js, Material UI, Firebase*

- Engineered a full-stack inventory manager that lets users instantly add, edit, delete, and text-search pantry items, refreshing the list in real time.
- Designed a minimalist, mobile-first UI with Next.js and Material UI, surfacing every core action.
- Deepened React expertise by building reusable CRUD hooks, a debounced search bar component, and custom MUI theming.

TECHNICAL SKILLS

Languages: Java, Python, SQL, JavaScript, HTML, CSS
Frameworks: Next.js, Node.js, React Native
Libraries: Tkinter, NumPy, Pandas, Matplotlib, React, Streamlit, Python file-handling
Tools: Firebase, Clerk Auth, Material UI, NGROK, Figma, Outlook