Manavi Sharma

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Education

- **University of Kansas** — Kansas, USA
  Master of Science in Computer Science; advised by Prof. Arvin Agah; GPA: 4.0/4.0 — *Aug 2024 – May 2026(Expected)*
- **Manipal Institute of Technology** — Karnataka, India
  Bachelor of Science in Computer Science (Minor in Big Data); GPA: 8.01/10 — *Oct 2020 – May 2024*

Technical Skills

Programming Languages: Python, C/C++, JavaScript, TypeScript, SQL, Go, MATLAB
Machine Learning/AI: PyTorch, TensorFlow, Scikit-learn, OpenCV, Transformers
Data Science & Visualization: NumPy, Pandas, Matplotlib, Seaborn, Plotly, Power BI
Web & App Development: React.js, Node.js, Streamlit, Docker
Databases & Cloud: MySQL, MongoDB, Firebase, AWS

Professional Experience

- **Onlyc2c - Software Intern** — Jan 2025 - Present
  - Building and automating a scalable Corp-to-Corp hiring platform for the US market, streamlining job matching and improving user experience while reducing manual workflows by 60% through cron-driven lifecycle management.
- **Genpact, Software Intern** — Feb 2024 - Aug 2024
  - Automated the ETL pipeline for large-scale CPG data using Apache Airflow and Amazon S3, reducing ETL time by 40% and enabling near real-time analytics across terabytes of historical and transactional data.
  - Built and tuned predictive models (Random Forest, Decision Tree, SVR, Facebook Prophet) to forecast CPG demand, achieving up to 30% improvement in accuracy via GridSearchCV and supporting data-driven planning.
- **Arka Aerospace - Software Intern** — June 2023 - Oct 2023
  - Contributed to the development of a swarm drone system using Raspberry Pi, ROS, and autonomous navigation algorithms for real-time runway obstacle detection, improving detection efficiency by 40% and reducing false positives.
  - Implemented MAVLink protocol and XBee PRO 900hp modules to enhance drone-to-ground communication, increasing reliability and achieving 95% accuracy in obstacle mapping through optimized ROS nodes and field testing.
- **GalaxEye - Software Intern** — Dec 2022 - Feb 2023
  - Contributed to India's first private drone-based SAR system by integrating MAVLink with a LoRa module, enhancing telemetry for defense, agriculture, and aquaculture with 30% greater range and 20% lower latency.
- **Parikshit Student Satellite Team – Embedded Driver Development Head** — Jan 2021 - Feb 2024
  - Led embedded systems development for a 2U LEO satellite under ISRO mentorship; built drivers for gyroscopes and magnetometers using UART, SPI, and I2C, improving data accuracy by 20%.
  - Designed, tested, and space-qualified a COMMS board (MSP430, AX.25), achieving 99% system reliability in thermal vacuum and radiation environments; also developed team website using React.js.

ONGOING RESEARCH

- **AI-based Alzheimer's Detection Using Speech Data**: Developing AI models for early Alzheimer's diagnosis by analyzing patient speech patterns and cognitive decline markers, under the guidance of Dr. Arvin Agah.
- **Behavioral Pattern Detection for Autism**: Researching autism spectrum disorder (ASD) through behavioral signal processing and pattern recognition techniques, mentored by Dr. Sumaiya Shomaji.

Projects

- **AI-Powered Collaborative Code Editor**: Built a real-time code editor with chat and AI code assistance using React.js, Node.js, WebSocket, and Google Gemini. Enabled in-browser execution via WebContainer API, improving collaboration productivity by 25%.
- **WhatsApp Clone**: Developed a real-time messaging app using MERN stack and socket.io with chat, notifications, and MongoDB-based data persistence. Achieved seamless communication and instant sync across devices.
- **Ride-Sharing Platform**: Created a MERN stack ride-booking platform with live tracking using Google Maps API and real-time driver–rider communication via WebSocket. Integrated Stripe payments and custom RESTful APIs for user management.
- **Used Car Price Prediction**: Trained machine learning models (Random Forest, Neural Networks) on 10K+ car listings to predict prices with 85% accuracy. Visualized key trends and model performance using Matplotlib.
- **Sentiment Analysis on Course Feedback**: Built a distributed NLP system using Python and NLTK to analyze course sentiment, visualized insights in Tableau, and improved feedback quality, increasing satisfaction by 15%.
- **E-Commerce Platform**: Built a full-stack shopping app with MERN stack featuring filtering, cart, and payments via Stripe/Razorpay. Included an admin dashboard with product/order management using REST APIs.
- **Email System**: Designed a Gmail-style email client using MERN stack with real-time messaging, intuitive folder system, and optimized API structure for responsiveness and scalability.