Tushar Chaturvedi

607-280-6116 | tic4@cornell.edu | Ithaca, NY 14853 | LinkedIn | GitHub

Education

Cornell University (College of Engineering) Ithaca, NY

Bachelor of Science in Computer Science, Minors in Applied Economics and Artificial Intelligence *Aug. 2021 – May 2025*

- **Relevant Coursework:** Analysis of Algorithms, OOP & Data Structures, Functional Programming, Machine Learning, Multivariable Calculus, Probability & Statistics, Linear Programming, Discrete Math, Akuna Capital Options Trading 201

Technical Skills

Languages/OS: Python, Java, OCaml, C++, JavaScript, TypeScript, HTML, CSS, R, Linux, Swift, Relational Databases
Tools/Frameworks: Git, React, Node.js, Amazon Web Services (EC2, S3, Glue), Cloud Computing, Selenium, Figma, LangChain
Data Science/ML/AI: Generative AI, LLM Optimization, MySQL, Postgres, boto3, Pandas, NumPy, Scikit-learn, Matplotlib, PyTorch, Tableau, TensorFlow, Hadoop, PySpark, AWS SageMaker, XGBoost, Test-Driven Development, Big Data Processing
Languages: English (Native), Hindi (Native), Mandarin (Professional)

Work Experience

Data Science Intern May 2024 – Present

Nissan Motor Corporation *Franklin, USA*

- Developed a data-driven web app using Snowflake and AWS for real-time infrastructure tracking; 25% lower response time
- Created ML starter-kits on AWS SageMaker for predictive analytics across Nissan's many use-cases, including cost models, car sales, and image recognition; 30 hours reduction in development time with Big Data
- Directed web scraping and sentiment analysis using BeautifulSoup and spaCy to evaluate Nissan EVs against competitors

CIS Teaching Assistant (CS 4670/5670 - Introduction to Computer Vision) Jan. 2024 – June 2024

Cornell University *Ithaca, New York*

- Led 20+ TAs, developed comprehensive lecture notes for Prof. Bharath Hariharan, and provided support to 300 students, enhancing engagement in Computer Vision, Linear Algebra, and ML concepts through 1-on-1 guidance and group reviews

Data Scientist Intern June 2023 – Aug. 2023

Accenture *Mumbai, India*

- **Wrangled 1M+** customer transactions to identify trends and detect unethical financial practices with **EDA** techniques
- Developed and deployed supervised machine learning models for a bank's AML program, achieving a 30% reduction in false-positive alerts through rolling-window analysis
- Engineered features to enhance model accuracy by incorporating transaction patterns and customer behavior metrics
- Presented insights to C-Suite, to enable decision-making, and integrated models, boosting detection speed by 17%

Software Engineering Intern June 2022 – Jan. 2023

UD Trucks (Isuzu Motors Ltd.) *Tokyo, Japan*

- Worked with SaaS developers to construct data pipelines, resulting in 20% more vehicle data accuracy, utilizing AWS Glue
- Designed a Developer Portal using React and Node.js, enabling external developers to interact with 50+ UD Trucks' APIs
- Constructed secure API authentication mechanisms using JWT, ensuring controlled access to vehicle data and services
- Built and maintained RESTful APIs for seamless data integration and communication, supporting 100+ weekly API calls
- Actively participated in Agile Scrum meetings, contributing to sprint planning, retrospectives, and daily stand-ups in SDLC

Software Engineering Intern June 2020 – Aug. 2020

Volvo *Tokyo, Japan*

- Developed a Selenium-based RPA solution, significantly enhancing fleet managers' response to security breaches in vehicles
- Conducted on-site assessments at manufacturing plants and studied road-map for RPA and web automation implementation

Projects & Co-curricular Activities

Intelligent Health Assistant with RAG and Conversational AI | *Software Developer* Aug 2024 – December 2024

- Built a full-stack AI health assistant integrating GPT-4, achieving 81% accuracy across 50k+ medical articles

Cornell Cup Robotics (Senior Software Developer & Systems Engineer) Jan. 2022 – Present

- Developed and validated an A* search algorithm for a robotic lab assistant, optimizing pathfinding
- Integrated LIDAR, infrared, ultrasonic sensors, and encoders to enhance object detection by approx. 22%
- Improved data transmission speed to Jetson by 23% using JSON serialization and created a GUI simulation with Tkinter

J.P. Morgan Software Engineering Virtual Internship (Forage Certification) July 2024

- Developed a real-time trading dashboard using React, TypeScript, and Perspective, enhancing trader decision-making by visualizing live stock data and price ratios with optimized data processing through WebSocket integration.

J.P. Morgan Quantitative Research Virtual Experience (Forage Certification) July 2024

- Engineered a predictive pricing model for natural gas storage contracts using ARIMA, achieving 95% accuracy using historical data and seasonal trends
- Formulated a risk assessment tool for personal loans and mortgages, predicting default probabilities with 92% accuracy using logistic regression and decision tree models

Japan U-19 National Cricket Team | *International Athlete* Aug. 2017 – Aug. 2021

- Competed in the U-19 **Cricket World Cup** in South Africa, Tour of Australia, and MVP in national league
- Learned to effectively work in a high pressure environment, inspire teamates, and developed professional self-discipline