

# Tushar Chaturvedi

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## EDUCATION

### Cornell University (College of Engineering)

Ithaca, NY

*Bachelor of Science in Computer Science, Minor in Applied Economics*

Aug. 2021 – May 2025

- Relevant Coursework:** Analysis of Algorithms, OOP & Data Structures, Functional Programming, Machine Learning, Multivariable Calculus, Probability & Statistics, Linear Programming, Discrete Math, Natural Language Processing

## 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, ROS  
**Data Science/ML/AI:** MySQL, Postgres, boto3, Pandas, NumPy, Scikit-learn, Matplotlib, PyTorch, TensorFlow, Tableau, Hadoop, Snowflake (Cortex LLM), PySpark, AWS SageMaker, XGBoost, RAG, Test-Driven Development, Distributed Systems  
**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

### 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

### Tech Consulting @ Cornell | Treasurer & Software Developer

Sep. 2022 – Present

- Spearheaded software solutions for clients, managed club finances, and organized networking events w/ industry professionals

### 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 teammates, and developed professional self-discipline