ASHWIN A. SHARMA

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Work authorization: F-1 (NYU) CPT eligible Fall 2025/2026 • NYC/Remote

EDUCATION

New York University *Sep 2024–May 2026*
MS Computer Science – GPA: 3.77/4.00

University of Mumbai *2019–2023*
BE Computer Engineering – CGPA: 8.21/10

PROFESSIONAL EXPERIENCE

Senior Machine Learning Engineer, ViaLYTICS Consulting *Aug 2022–Apr 2023 • Remote*

- Developed reinforcement learning autoscaler (PPO/DQN) with real-time feedback loops, cutting AWS EC2 idle spend by 19%.
- Deployed Faster R-CNN + OpenCV traffic monitoring at 18 FPS with 97% precision across distributed inference nodes.
- Built PyTorch + RLlib portfolio optimizer (Sharpe 0.99, +80% backtested annual return) exposed through REST API.
- Drove CI/CD, containerization, and distributed training best practices.

Founding ML Engineer & Tech Lead, Nextap AI *Apr 2023–Jul 2024*

- Led engineering team executing 300+ AI projects spanning planning, generative modeling, and reinforcement learning.
- Published Android app *Artific AI* (1,500+ installs, 100+ DAU) showcasing multimodal foundation-model integrations.
- Delivered imitation-learning prototypes for robotics policy alignment and sequential decision-making.

Founding ML Engineer, Nextap AI *Sep 2021–Aug 2022 • Mumbai, India*

- Grew AI platform to five-figure USD revenue within six months; launched Codilarity.com (2,000+ developers).
- Shipped 120+ RL & CV proofs-of-concept for autonomous systems.

KEY PROJECTS IN SELF-DRIVING & REINFORCEMENT LEARNING

Autonomous Driving Simulator + RL Agent ***Python · RLlib · Pygame***

- Custom simulator with LiDAR, convex-hull tracks, and collision detection.
- Trained PPO/DQN; PPO delivered +160% reward and 94% generalization to new maps.
- Released as pip module supporting NYU RL labs.

Generative + Imitation Learning for Robotics (RAG Assistant for ROS2) ***TensorFlow · Hugging Face***

- Fine-tuned 4-bit LLM on 1,700+ robotics instructions, cutting development time by 40%.
- Integrated vector retrieval (<500ms latency, 95% task success) for robotics planning queries.

Pandemic Policy Simulator with RL ***NumPy · RLlib***

- Vectorized environment delivering 700× faster simulation (700ms → 1ms frame).
- DQN/PPO policies achieved 87% fidelity vs. human policies; published at IEEE ICCSAI ’23.

TECHNICAL SKILLS

Reinforcement Learning	PPO, DQN, Imitation Learning, Generative Modeling, End-to-End Driving
Autonomy	Self-Driving Simulation, Planning & Reasoning, LiDAR perception, fleet-scale data
Languages	Python (prod), C++, JavaScript/TypeScript, SQL
Deep Learning	PyTorch, TensorFlow, Hugging Face, Model Alignment, Optimization
Distributed Systems	AWS EC2/S3/CloudWatch, Docker, GitHub Actions
Computer Vision	OpenCV, Faster R-CNN, multi-camera pipelines
Databases	MongoDB, PostgreSQL (basic)

Tools Linux, Bash, pandas, matplotlib, pytest

PUBLICATIONS

IEEE ICCSAI ’23 *Reinforcement-Learning-Driven Pandemic Policy Simulator*, IEEE Xplore.

IEEE IBSSC ’22 *Statistical Data Analysis using GPT-3*, DOI: 10.1109/IBSSC56953.2022.10037383.