Prince Patel

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EDUCATION:

Massachusetts Institute of Technology *Expected 2025*

BS, Computer Science, Artificial Intelligence, and Mathematics, GPA: 4.8, SAT Math: 800, SAT Reading: 740

- Relevant Coursework: Software Construction (6.031), Computer Vision (6.8300), Causal Inference (6.S059), Statistics (18.650), Deep Learning (6.S898), Machine Learning (6.036), Optimization Methods (6.7201), Differential Equations (18.03), Algorithms and Data Structures (6.1210), Probability and Random Variables (18.600), Linear Algebra (18.06)
- Organizations: South Asian Association of Students (Big Events Committee), Phi Kappa Theta (Risk Manager)

WORK EXPERIENCE:

Mach Industries *Jan. 2024*

Software Engineer Intern

- Developed a flight controller on Arduino using PID loops for an autonomous glider plane, enhancing its range by 10x
- Improved VTOL hovering stability by fusing a CNN-powered optical flow calculator with IMU readings and applying an EKF for an 10-fold increase in displacement measurement accuracy

Epicore Biosystems *June 2023 – Sep. 2023*

Data Science Intern

- Increased the accuracy of a hydration-tracking wearable to 95% by implementing a generalized linear model for forecasting sweat rate with accelerometer and temperature data inputs
- Presented outcomes of implementing new predictive model to company executives and potential investors

Biomechatronic Group, MIT Media Lab *Mar. 2023 – Dec. 2023*

Undergraduate Researcher

- Attempting to predict intentions of upper extremity amputees and translating to continuous prostheses control
- Implemented computer vision hand tracking for additional training data validation, saving five hours per session

Marine Robotics Lab, MIT CSAIL *Dec. 2022 – Apr. 2023*

Undergraduate Researcher

- Trained a locomotion policy for a quadruped robot in Isaac Gym using a PPO reinforcement learning program
- Accessed the robot's onboard cameras and LiDAR sensors to add data inputs to the existing RL policy

EXTRACURRICULAR EXPERIENCE:

MIT 2026 Class Council *Mar. 2023 – Present*

Vice President

- Collaborated with campus organizations to forge partnerships, expanding the reach and impact of class-wide initiatives
- Orchestrated initiatives to foster class unity, promote inclusivity, and cultivate a welcoming environment for all students

MIT Capital Partners *Mar. 2023 – Present*

Sourcing Principal

- Demonstrated expertise in analyzing industry trends, competitive landscapes, and growth potential of startups
- Employed strong communication skills to establish mutually beneficial partnerships with startups and VC clients

PROJECTS:

Denoising EMG Signals *December 2023*

- Identified the issue of low signal-to-noise ratio in neuroscience research, specifically for brain-computer interfaces
- Improved signal processing of raw sEMG data using a denoising autoencoder model with self-attention in the encoder

SKILLS & INTERESTS:

- Python (TensorFlow, PyTorch, Pandas, numpy), C, statistical analysis, science communication, project management
- Brain-computer interfaces, autonomous machines, aviation, volleyball, weightlifting