Shraavasti Bhat

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EDUCATION

University of Pennsylvania | Philadelphia, PA — May 2026

Dual Degree - Jerome Fisher Program in Management & Technology

School of Engineering and Applied Sciences - Bachelor of Applied Science | **Computer Science**

Wharton School - Bachelor of Science in Economics | **Management**

Computer Science | GPA: 3.31/4.0 | **Management** | GPA: 3.8/4.0 | **Cumulative GPA:** 3.31/4.0

COURSEWORK & AWARDS

Relevant Coursework: Embedded Software, Computer Vision, Linear Algebra, Big Data Analytics, Operating Systems, Data Structures & Algorithms, Object-Oriented Design

SKILLS AND PROJECTS

Backend & Systems: Python, C++, Git, Linux, Docker, CUDA, NVIDIA Jetson, Raspberry Pi, Arduino, 3D Printing
AI & ML: PyTorch, NVIDIA Isaac Sim, HuggingFace (LeRobot, SmolVLA), OpenCV, Imitation Learning, Sim-to-Real Transfer, Domain Randomization, TensorFlow

LeRobot SO-101 - **Robotic Manipulation System** (HuggingFace LeRobot, PyTorch, VLA) — Jan 2026 - Ongoing

- Building bimanual robotic manipulation system using LeRobot's framework with leader-follower teleoperation
- Implementing imitation learning pipeline using ACT (Action Chunking Transformer) for dexterous manipulation tasks
- Exploring Vision-Language-Action model integration for natural language-conditioned robotic control

JetBot VLA Navigation - **Sim-to-Real Autonomous Navigation** (Isaac Sim, SmolVLA, PyTorch) — Sep 2025 – Jan 2026

- Developed end-to-end sim-to-real ML pipeline for vision-based autonomous robot navigation on NVIDIA Jetson
- Generated 16,500+ synthetic training samples in NVIDIA Isaac Sim with domain randomization for robust transfer
- Fine-tuned SmolVLA (450M params) achieving 1.5GB memory footprint for edge deployment
- Implementing natural language instruction understanding for flexible, goal-conditioned robot control

Procura - **Multi-Agent BOM/PO Automation System**, (LangGraph, Claude, FastAPI, React) — Jan 2026

- Built a 5-agent LangGraph system (Parser, Matcher, Optimizer, PO Generator, Tracker) to automate Bill of Materials processing and Purchase Order generation for procurement workflows
- Implemented RAG-powered supplier matching using pgvector for semantic search across supplier catalogs, with human-in-the-loop approval for low-confidence matches

Coral Reef Mapping Drone **- AI/ML,** (Python, Tensorflow, Image Segmentation, 3D Printing, Laser Cutting) — Dec 2020

- An open-source surface-water drone (a sailing robot) for mapping shallow coral reefs and capturing high-resolution images to support reef-health analysis.
- Collected image data and carried out annotation, ML-based coral classification and analysis (e.g. segmentation, species/habitat tagging, model training and deployment) using computer-vision.

RELEVANT EXPERIENCE

TE Connectivity, Product Management Intern (High Speed Cable Portfolio) | Middletown, PA — May 2025 – Aug 2025

- Identified and prioritized cross-functional blockers, **aligning Product, Engineering, Sales, and Marketing** to deliver sample kits that accelerated customer evaluation and design-in cycles
- **Joined calls with silicon vendors and OEM customers** (Broadcom, Semtech, Marvell, Dell, HP), gaining insight into debugging workflows, chip qualification, and customer escalation.

Penn Human-Computer Interaction (HCI) Lab, Teaching Assistant | Philadelphia, PA — Sep 2022 – Aug 2023

Taught two courses, Designing Programming Environment & Intro to Human-Computer Interaction (inaugural class)

- Researched how user anonymity impacts sentiment and polarization on social media (Sep 2022 – Jun 2024)
- Received Best Presentation in 2023 Sigma Xi International Forum on Research Excellence (IFoRE)

LANGUAGES

Language: English (Fluent), Mandarin (Intermediate – HSK 5), Spanish (Beginner)
Interests: K-pop, travel shows, Harry Potter, Soccer, Tennis, caricature portraits, learning languages, trying new foods