Chinmay Govind

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EDUCATION

University of Pennsylvania, School of Engineering and Applied Sciences

Aug. 2024 – May 2028

B.S.E in Artificial Intelligence & Computer Engineering — GPA: 4.0

Philadelphia, PA

- Relevant Coursework: AI Lab, Computer Architecture, Linear Algebra, Calculus III, Discrete Math, Data Structures & Algorithms, Signal Processing
- Honors: 2nd in Penn Class of 1920 Math Contest, Penn Undergraduate Research Mentoring Award, Wharton WUDAC Datathon 1st Prize

Cumberland Valley High School

Aug. 2020 – June 2024

GPA: 4.0 — *SAT:* 1600

Mechanicsburg, PA

EXPERIENCE

Penn Whales Research Group

May 2025 – Present

Machine Learning Researcher

Philadelphia, PA

- Developed CNN models in PyTorch to classify whale calls from 50GB+ acoustic datasets with sub-second accuracy.
- Reduced whale localization times from days to seconds by replacing traditional signal processing techniques with deep learning models.

Penn Electric Racing (Formula SAE)

Sept. 2024 – Present

 $Electrical\ Software\ Developer$

Philadelphia, PA

- Developed embedded firmware in C++/Rust for electric racecar. Created live analytics data-server, cutting down time taken to collect data from the car from minutes to milliseconds.

Penn CS Department Course Staff

Dec. 2024 – Present

Teaching Assistant - CIS 1600 (Discrete Math)

Philadelphia, PA

- Led weekly guided sessions for students in combinatorics, probability, logic, and graph theory.
- Developed custom question software to dynamically generate questions from templates, used by 100+ students.

Science Olympiad

Aug. 2019 – Present

President, Developer, Organizer

Mechanicsburg & Philadelphia, PA

- Led a 100+ member team, won 125 medals, and organized 3 large-scale tournaments.
- Built web-based practice tools for Astronomy and Codebusters events, leading to first prizes in state tournaments.

Projects

Vehicle Telemetry Server | Docker, Rust, Python, Embedded C++, WebSockets

Dec. 2024

Built cloud-enabled server for real-time telemetry from electric racecar, processing 200+ sensors at 1kHz.
Containerized the server architecture for concurrent development within our 10 member software team.

QuickCal Chrome Add-On | JavaScript, Web3, AWS Lambda, Gemini API

Dec. 2024

 Built Chrome extension using Google Gemini to parse text and add calendar events. Redesigned the backend in AWS Lambda to reduce setup time from 2 minutes to instant access.

AstroGPT | Python, Flask, OpenCV, Selenium

Feb. 2024 – Apr. 2024

- Built tool to catalog 5,000+ astronomy images for Science Olympiad.

Robot Odometry Software | C++, Arduino

Dec. 2023 – Apr. 2024

Designed precision robot localization system achieving 2cm positional accuracy over 10+ meter courses, securing
2nd place at PA State Championship among 50+ competing teams through advanced sensor fusion algorithms.

Robot Vision System (FTC) | Java, OpenCV, TensorFlow

Dec. 2021 - Apr. 2022

- Implemented real-time computer vision system detecting 3 object types with 90% accuracy at 30fps, enabling autonomous navigation and earning PA Software Control Award among 100+ teams statewide.

Technical Skills

Languages: Java, Python, JavaScript, C, C++, Rust, PHP, TypeScript, Go, SQL, .NET, IATEX, OCaml, C#, Bash Frameworks/Tools: Git, Github, Docker, Kubernetes, Node.js, MongoDB, PostgreSQL, Spring Boot, Flask, Django, Apache, React, Selenium, Postman, GDB, Ghidra, Arduino, Jupyter Notebook, Linux, UNIX, PowerShell

Libraries/Platforms: PyTorch, NumPy, Scikit-Learn, MATLAB, CUDA, OpenCV, TensorFlow, AWS Lambda, GCP Vertex AI

Interests: Algorithms, Machine Learning, Cryptography, Cybersecurity, NLP, Computer Vision

Certifications: Google Cloud Machine Learning Engineer Path, IBM Web Dev, Google IT Support, AP French