Ansh Goyal

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RELEVANT EXPERIENCE

Regeneron Pharmaceuticals **June 2025 – Present (ends December 2025)**
Intern/Co-Op - Data Science and Automation, Purification Development
Tarrytown, NY

- Built automated document generation app to streamline reporting across the Preclinical Manufacturing and Process Development group. Designed automation processes for 10 unique document types across 3 subgroups within PMPD.
- Collaborating with a five-person dev team to expand app functionality for more groups and maintain tool integration.
- Gained full-stack development experience while collaborating in an Agile environment with a large developer team.

Laboratory for Computational Intensive Care Medicine **January 2024 – Present**
Undergraduate Researcher - Stroke Segmentation *Baltimore, MD*

- Built PyTorch models to detect and locate acute ischemic lesions in CT scans, improving accuracy in lesion diagnosis.
- Currently refining the models to boost performance, adding new metrics, and preparing a manuscript for publication.

Undergraduate Researcher - ICP Waveform Generation *Baltimore, MD*

- Validating a deep learning model that predicts intracranial pressure (ICP) from physiological data across patients.
- Expanding the model with ECG and PPG inputs to generate synthetic ICP waveforms for non-invasive monitoring.

Tenopedics, BME Design Team 18 **December 2023 – June 2024**
Design Team Member *Baltimore, MD*

- Created a novel cannula that expanded operating space in ABT procedures, improving space visualization by ~900%.
- Directed prototyping, designed three validation tests, engaged with surgeons, clinicians and engineers for feedback.

UPMC Children's Hospital of Pittsburgh **June 2022 – August 2022**
Research Intern *Pittsburgh, PA*

- Investigated the effects of congenital heart disease on infant brain functional connectivity using fMRI image analysis.
- Built a Python/NiPype pipeline for 140+ fMRI scans, extracting features and generating correlation maps in NumPy.

Polaris (Personal Project) **September 2025 – Present**
Developer *New York City, NY*

- Developing a gamified iOS app for habit tracking and self-improvement, with daily logging and progression features.
- Using Swift and SwiftUI to implement habit tracking, short and long-term goal setting and a Star Map for progress.
- Designing spaceship system pillars (Navigation, Crew Quarters, etc.) to represent different areas of self-improvement.

EDUCATION

The Johns Hopkins University **August 2023 - May 2027**
BS/MSE in Biomedical Engineering, Minor in Computer Science, GPA: 3.70 *Baltimore, MD*

- Whiting School of Engineering Dean's List, Fall 2023, Spring 2024, Fall 2024, Spring 2025
- BME Design Team, Henderson Hopkins MATH Tutor, BMES (Outreach Committee)

Upper St. Clair High School **August 2019 - June 2023**
Valedictorian, GPA: 5.00(W), 4.00(UW) *Pittsburgh, PA*

- National Merit Finalist; President, Speech & Debate; TEDx Speaker; ITEEA REACH Challenge Team Lead.

RELEVANT SKILLS

- **Programming:** Python, C, C++, Java, Swift, SwiftUI, PostgreSQL, HTML
- **ML & Data Science:** PyTorch, TensorFlow, NumPy, Scikit-Learn, Pandas, Signal Processing, Medical Imaging
- **Tools & Systems:** Git, Docker, Flask, Linux, Windows Subsystems for Linux, Jinja, NixOS
- **Other:** Computational Biology, Biomedical Design, Data Analysis, Public Speaking, Collaboration

RELEVANT COURSEWORK

- Machine Learning • Data Structures & Algorithms • Intermediate Programming (C/C++) • Discrete Mathematics for CS • Linear Algebra & Differential Equations • Intermediate Probability & Statistics • Biomedical Engineering & Design • Calculus III