Shounak Ghosh

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Education

New York University, Tandon School of Engineering, Brooklyn, NY — May 2025
B.S. Computer Science, GPA: 3.75, Dean's List 2023
Relevant Coursework: Computer Architecture, OOP, Data Structures & Algorithms

FourthBrain.ai, Machine Learning Engineering Program — August 2022
Relevant Topics: Computer Vision, Object Detection, NLP, Auto-ML, ML-Ops

Stanford University (Coursera), Graph Algorithms & Specializations — May 2019

Technical Skills

Coding Languages:	Python, Java, C++, HTML, CSS, JavaScript, React.js, NodeJS
Machine Learning:	Tensorflow, Keras, PyTorch, OpenCV, Scikit, Seaborn, MatPlotLib, Pandas, Numpy, MediaPipe
Other Tools:	Fusion360, Cura, Revit, Mathematica, Gretl, LaTeX,

Work Experience

Machine Learning Instructor: IDTech Academy, Palo Alto, CA — Summer 2023
- Designed and taught a thorough, insightful curriculum focused on computer vision with Nvidia's Jetson Nano
- Fostered student engagement and understanding by adapting to individual study techniques and past experience
- Ensured 40 students received Jetson AI specialist certifications from Nvidia's Deep Learning Institute

Software Engineering Intern: Oloid.ai, San Jose, CA — Summer 2021, 2022
- Built image classifier for 13+ types of RFID badge scanners with 98% accuracy, used for easy identification and integration with Oloid's trademark keyless scanner
- Created Tensorflow-Keras pipeline with data tuning and augmentation, React.js frontend for live image classification
- Built AI liveness detection model for user authentication in contactless-identification environment
- Leveraged Python, C++, and Google's MediaPipe facial recognition repository

1072 Harker Robotics – Electrical Subteam Director — Spring 2022
- Coordinated workdays and delegated tasks between underclassmen leads, parent volunteers, and newer members
- Gained experience in robot design, electrical wiring, machining parts, mechanical assembly, and woodwork
- Organized and volunteered at summer outreach robotics camp

Inspirit AI Ambassador – Top 10 Fellow — Summer 2021
- Conducted outreach providing AI learning resources to multiple schools, clubs and communities over a 5-week period
- Presented to 40+ individuals about importance of ethics in AI and diversification of datasets and researchers

Personal Projects

BetterVision Glasses — Fall 2022
- Created a pair of affordable assistive glasses for visually impaired
- 3D printed custom frames with Arduino Nano and ultrasonic sensor mounts for live object detection and Bluetooth headset communication

Optimized Context-Aware Defenses for Image Classifiers — Summer 2021
- Surpassed predetermined adversarial-resistance benchmarks via combination of 10 unique black & white-box models

Developed EKG Classifier Resistant to Adversarial Attacks — Summer 2020
- Augmented state-of-the art 34-layer EKG classifier to provide accurate results when given adversarial (malicious) data
- Implemented using Google Colab and 2017 Computing in Cardiology dataset (PyTorch)

Computer Architecture — Fall 2020
- Designed finite-state machines, multiplexers, Karnaugh maps, and implemented using logic gates on breadboard

Neural Networks — Spring 2020
- Programmed an N-layer Perceptron model from scratch capable of image recognition (Java)

Compilers & Interpreters — Fall 2019
- Built compiler for the Pascal language and interpreter for arbitrary context-free grammar