JACOB HOFFMAN

347-209-2325
jackstudent149@gmail.com

Portfolio Website - https://jacobhoffman.tk

FORMER EDUCATION / COURSEWORK

- Teaching Assistant @ Carnegie Mellon University
- B.S. In E.C.E. @ Carnegie Mellon University (2020)
- M.S. In Eng. Management @ Johns Hopkins (2023)
- M.S. In Applied Math @ Johns Hopkins (2024)
- M.S. In Quant. Finance. @ Johns Hopkins (2025)

- (15-410) Operating System Design And Implementation
- (18-461/661) Intro to Machine Learning (Graduate)
- (15-351) Algorithms and Advanced Data Structures
- (18-491) Digital Signal Processing
- (18-370) Fundamentals Of Control

WORK

- **IBM | Artificial Intelligence Engineer | November 2021 – Current**
  Developing and evaluating state of the art functionality for a U.S. Naval information engine.

- **Johns Hopkins Applied Physics Laboratory | Data Scientist | May 2021 – November 2021**
  Developed decision making algorithms for U.S. anti-missile systems similar to Israel's famous Iron Dome system, but used for much more dangerous threats. Contributed machine learning and control theory skills. *Classified.*

- **Greenstar Group | Software Contractor | December 2020 – April 2021**
  Developed full stack technology for Sentact LLC. (healthcare) and Cardiff, Provins & Angel LLC. (finance)

- **Uncommon Core | Software Engineer | November 2019 - November 2020**
  Developed an automatic grading API incorporating techniques such as Hough Line Transforms, Gaussian Blur and Convolutional Neural Networks. Moved the team onto a Google Cloud solution utilizing Docker and Kubernetes.

- **CMU Dept. Of ECE | Teaching Assistant For (Graduate) Introduction To Machine Learning | Spring 2020**
  Taught graduate students fundamental machine learning techniques such as Linear Regression, Naïve Bayes, Logistic Regression, Multiclass Classification, SVMs, Nearest Neighbors, Decision Trees, Ensemble Methods, Neural Networks, Clustering, PCA, Online Learning, and Reinforcement Learning.

- **CMU Dept. Of ECE | Theoretical Machine Learning Researcher | Spring 2020**
  Implemented various machine learning methods to classify children's stages of sleep and detect health anomalies given recorded brain waves and vitals from exclusive hospital shared datasets.

- **General Motors | Embedded Controls Intern | Stability Of Vehicle | Summer of 2019**
  Applied control theory concepts to design a brake system for a trailer. The system included ABS and ESC safety features. The system detected instability of a trailer in real time and dampened trailer sway by engaging the brakes.

SKILLS

- Docker | Kubernetes | Python | Flask | MATLAB | R | C | C# | C++ | Java | JS | HTML | CSS | PHP | React | Netlogo | Scheme | Heroku | Google Cloud | AWS | SQL | Pytorch | Tensorflow | REST | FLUX | Apache Spark

TRACK AND FIELD ACHIEVEMENTS

- Ran the 46th fastest indoor 300m time of 2016 in the U.S.A (35.16 Fully Automatic Time, Stuyvesant Grey Ducks)