JACOB HOFFMAN

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Portfolio Website - https://jacobhoffman.tk

FORMER EDUCATION / COURSEWORK

- Teaching Assistant @ Carnegie Mellon University
- B.S. In ECE @ Carnegie Mellon University (2020)
- M.S. In C.S. @ Johns Hopkins University (2022)
- M.S. In Finance @ Johns Hopkins University (2023)
- Dean's List Spring 2018

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

WORK

- **Johns Hopkins Applied Physics Laboratory | Data Scientist | May 2021 - Current**
  Improving decision making algorithms for U.S. air and missile defense. *Classified*

- **Greenstar Group | Software Contractor | December 2020 – April 2021**
  Developed fullstack technologies 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, and deployed it on Google Cloud Kubernetes Engine.

- **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.

- **CMU Dept. Of ECE | Signal Processing Researcher | Ultrasonic Positioning Systems | Summer of 2018**
  Worked on close range ultrasonic positioning systems for blind person navigation. Chirps, STFTs, and FFTs were some of the DSP concepts used to implement the system.

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

TRACK AND FIELD ACHIEVEMENTS

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

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