Shlok Khandelwal

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EDUCATION

- **University of Maryland, College Park** — College Park, Maryland
  Masters/Bachelor of Science in Computer Science and Mathematics GPA: 3.63 — *August 2017 – May 2021*
  Coursework: Algorithms, Discrete Structures, Reinforcement Learning, Linear Algebra, Multivariate Calculus

EXPERIENCE

- **Data Prophet** — Cape Town, SA
  Data Science Intern — *July 2018 - August 2018*
  - Performed exploratory data analysis on data from a manganese production facility.
  - Trained a Variational Autoencoder to reduce a 16,538 dimensional vector to 2 dimensions. Analyzed 2-d vector to determine clusters that maximized production output.
  - Integrated data preprocessing and data report pipelines with the frontend using Django and React.

- **Deep Brain Neurotech** — College Park, MD
  Undergrad Researcher Under Dr.El-Leithy — *January 2018 - December 2018*
  - Created a model to diagnose Parkinson patients using xgboost and extracted voice features, achieved 96% accuracy, and presented the model during UMD's Undergraduate Research Day.
  - Trained a model to diagnose Parkinson patients using transfer learning with InceptionV3 and drawings, achieved 93% accuracy, and presented the results at MLSE 2018, a machine learning conference hosted by CMU.
  - Collected EEG/MEG data from ADHD patients and preprocessed data to train a model.

PROJECTS

- **Centipede Atari AI**
  Developer — *November 2018*
  - Created a Deep Q Learning Network to beat the Atari game known as Centipede, using Open AI's library. Utilized a queue to capture various states of the game and used time and shooting to construct a reward function
  - Average reward after 2000 iterations of training was about 7600 points.

- **Yelp Camp**
  Developer — *June 2018*
  - Created a dynamic webpage that allows users to create and edit their own campgrounds while leaving reviews of other campgrounds.
  - The stack used was MongoDB, Express.js, and Node.js and frontend was developed using Bootstrap.

COMPETITIONS

- **Halite II**
  Competitor — *December 2017 - January 2018*
  - Open source artificial intelligence programming challenge created by Two Sigma. I placed 148th out of about 5600 competitors, and was among the top 50 university students.
  - Implemented a distance based decision algorithm in Java depending on various states of the game.

- **Jane Street Electronic Trading Competition**
  Competitor — *September 2018*
  - A 12 hour electronic trading competition where teams write a bot that can parse a custom exchange protocol, and develop a trading strategy to compete with other teams. I placed 6th out of 35 teams.
  - Created an algorithm that would calculate the fair value of commodities using an iterative average. This was used to calculate the fair price of two stocks that could be converted between each other to make a profit.

Languages: Java, C, Python, Javascript, Ruby, OCaml, HTML/CSS, SQL, MongoDB

Frameworks: React, Vue, Express, Keras, Scikitlearn, Pandas, Numpy

Tools: Git, Google Cloud Platform, Unix, AWS