Pranay Methuku

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Education

The Ohio State University, Columbus, OH — *B.S. Computer Science and Engineering*
Cumulative GPA (4.00 Scale): **4.00** — Jan 2017 – **May 2020** (Expected)

Technical Skills

Proficient: Python, Java, C, SQL, LaTeX; **Worked with:** JavaScript, Ruby, HTML, CSS, Bash, MATLAB
Tools and Technologies: Linux, Git, NumPy, Pandas, Rails

Relevant Coursework

Completed: Principles of Programming Languages, Speech and Language Processing, Operating Systems, Project: Web Apps, Artificial Intelligence II, Data Structures and Algorithms, Intro to Databases
Autumn 2019: Algorithms (**for grad students**), Computer Networking

Experience

- **Undergraduate Teaching Assistant**
  The Ohio State University — *Aug 2019 – Present*
  - Grading assignments, holding office hours, and providing assistance with in-class activities for Intro to Databases.
- **Undergraduate Researcher**
  The Ohio State University — *Dec 2018 – Present*
  - Advised by Dr. Alan Ritter on an independent machine learning research project involving large-scale textual Twitter data in the Cryptocurrency domain.
  - Used Twitter API and Python web scraping tools for tweet extraction, data cleaning, and further data analysis.
  - Currently working on a computational biology project aimed at improving existing state of the art relation extraction techniques, to be used in downstream machine learning tasks and automation of wet lab experiments.
- **Python and Web Development Instructor**
  STEM-U — *Jan 2018 - Mar 2018*
  - Introduced middle school children to coding with Python, and creating webpages with HTML and CSS.
  - Learned classroom management skills and the ability to engage with young minds at their experience level, by explaining use cases and complex concepts in a simple manner.

Computer Science & Engineering Projects

- **Classical ML** (independent) – view on Github — *Jan 2019 - May 2019*
  - Visualized and analyzed credible open source datasets, and implemented machine learning algorithms on them using Python data science libraries such as NumPy, Matplotlib, and Pandas.
  - Built systems and tested accuracies for predicting Pancreatic Cancer tumor type (98%), species of Iris flower (84%), whether an SMS text is spam (97%), etc.
- **Assess** (coursework) – Web App Group Project – view on Github
  Project Manager — *Jun 2018 - Jul 2018*
  - Digitized peer evaluations in group-based class environments, with scoped views for instructors and students.
  - Designed and developed a 3NF SQLite3 database, used Rails to implement REST routes and actions for managing models, and Devise for user authentication.
- **Advanced Energy Vehicle** (coursework)
  Team Leader, Public Relations — *Aug 2017 - Dec 2017*
  - Created a scaled transport AEV which focused on energy efficiency and operational consistency, by successfully delivering a cargo to the desired destination, on sloped railings using Arduino, MATLAB with a team of 4 members.
  - Collected and monitored test data; our vehicle was recognized for best energy efficiency (consuming 190 Joules, 26% more than the class mean), while maintaining an above average travel time cost (approx. 80 percentile).
- **Big Tic Tac Toe** (independent) – view on Github — *Jan 2018 - Dec 2018*
  - Developed an MVC based Tic Tac Toe desktop game which focused on flexibility and scalability using Java.
  - Implemented user-defined grid size (theoretically infinite), used dynamic programming concepts to optimize the average runtime of turn completion ten-fold on a grid size 100.