Kaustubh Deshpande

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Summary

I am a versatile software developer with diverse research experience. I am primarily interested in innovating at the intersection of statistics and computer science by making efficient use of my technical background. My strong communication skills have enabled me to take on multiple leadership roles. I have long term goals of becoming an entrepreneur.

Education

M.S. - University of California, Los Angeles – Class of 2023 - Applied Statistics
B.S. - University of California, Davis – Class of 2021 - Biomedical Engineering with Computer Science Minor

Skills

- Python
- MATLAB
- C++
- Java
- SQL
- Spark
- Linux, Bash Scripting
- Git
- Pytorch
- OpenCV
- SciKit-Learn
- NumPy, Pandas

Work Experience

1. Software Development Intern at Pyxeda.ai (June 2020 - Present)
   - Developed end to end Machine Learning and Deep Learning Pipelines and Solutions in GCP and AWS.
   - Technologies: Python, SageMaker, Google AI platform, TensorFlow, Keras, Pytorch

2. Full time Deep Learning researcher at Plant AI Lab – UC Davis (Jan 2020 - Present)
   - Developed tools that utilize synthetic data along with deep learning algorithms in computer vision with the goal of building low-cost AI systems that predict plant yield, structure, and health.
   - Technologies: C++, Python, Linux, Git, anaconda, Mask-RCNN, Pytorch, NumPy, OpenCV, Sci-kit

3. Machine Learning intern & Research Assistant at Dr. Aviran Lab - UC Davis (Dec 2019 - Present)
   - Contributed to day-to-day software development of PATTERNA – the lab's primary software product.
   - Tested and implemented logistic regression, SVM, random forest, discriminant analysis, K- Nearest Neighbor and Gaussian Naive Bayes binary classifiers to modify nucleotide scoring.
   - Technologies: NumPy, Biopython, Sci-Kit, Pandas

4. Data Analytics intern at Cleomesoft (Aug 2019 – Feb 2020)
   - Conducted data analysis, PCA and PCR on large data sets to reduce dimensionality, emphasize variation and identify strong patterns.
   - Technologies: Python, NumPy, Pandas, Seaborn, Plotly, SciKit-learn

5. Software Developer & Research Assistant at MiNi Lab (Jan 2019 – Nov 2019)
   - Developed computer vision software to achieve seamless integration of liquid handling using robotic automation.
   - Technologies: Python, OpenCV, DOBOT Magician API, Arduino micro-controller.

Patents and Publications

- "Microfluidic cap-to-dispense (cd): a universal microfluidic robotic interface for automated pipette-free high-precision liquid handling", Lab Chip 19 (2019), 3405– 3415.
- Pierce Radecki, Rahul Uppuluri, Kaustubh Deshpande, Sharon Aviran bioRxiv 2021.04.28.441809; https://doi.org/10.1101/2021.04.28.441809

Honors and Rewards

- Dean's Honors List Fall 2020

Clubs & Extracurriculars

- COO at Hard Tech Fund (HTF). HTF is a sustainability-based accelerator at UC Davis.