Kaustubh Deshpande

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Education

University of California, Davis – Class of 2021
Biomedical Engineering and Computer Science

Skills

- Python
- MATLAB
- R
- HTML5/CSS3
- JavaScript
- NodeJS
- MongoDB
- Spark SQL
- Bash Scripting
- GIT
- Pytorch
- TensorFlow

Work Experience

1. Software Development Intern at Pyxeda.ai (June 2020 – Present)
   - Working on developing end to end Machine Learning and Deep Learning Pipelines and Solutions in GCP

2. Deep Learning intern at Plant AI Lab – UC Davis (Jan 2020- Present)
   - At the UC Davis Plant AI lab, I am a paid research intern working on developing and implementing a Mask R-CNN model using PyTorch. The model trains on synthetic data and aims to translate over to vineyard renderings.

3. Machine Learning intern & Research Assistant at Dr. Aviran Lab - UC Davis (Dec 2019 - Present)
   - Contributed to software development of PATTERNA by implementing SVM, Random Forrest, KNN, Discriminant Analysis, Gaussian Naïve Bayes and Logistic Regression binary classifier.
   - Trained and worked with a Gaussian mixture model-hidden Markov model (GMM-HMM) statistical learning framework.

4. Backend development intern at Apptware (Dec 2019 - Present)
   - Contributed to RESTful API development using NodeJS and MongoDB.

5. Data Analytics intern at Cleomesoft (Aug 2019 – Feb 2020)
   - Used mainly Python (pandas, seaborn, plotly, SciKit-learn, NumPy) to perform data analysis & clustering in order to leverage data holistically.
   - Conducted PCA and PCR on large data sets to reduce dimensionality, emphasize variation and identify strong patterns.

6. Software Developer & Research Assistant at MiNi Lab (Jan 2019 – Nov 2019)
   - Developed high-level algorithms & python-based Computer Vision software to identify and dispense appropriate chemicals based on information obtained from computer vision.
   - Conducted Research using DOBOT Magician 4-Axis Robotic Arm, microfluidic-embedded container caps, and Arduino micro-controller to achieve seamless integration of liquid handling using robotic automation.
   - Published Research Paper.

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.

Personal Interests and Extracurriculars

- COO at Hard Tech Fund (HTF). HTF is a sustainability-based accelerator based at UC Davis.
- I play the guitar and love to travel.