Simmi Mourya

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Education

University of Pennsylvania: Master of Science in Engineering in **Computer & Information Science.** GPA-3.67/4.0 *May '21*

- **Courses**: Machine Learning, Vision, Advanced Perception, Internet and Web systems, Comp. Linguistics
- **Projects**: YOLO, Mask-RCNN for instance segmentation (Developed from scratch), Optical Flow for object tracking in video frames, Image stitching.

Cluster Innovation Centre, University of Delhi *July '17*

Bachelor of Technology in Information Technology and Mathematics. GPA-8.2/10

Udacity: Artificial Intelligence Engineer Nanodegree (2018)

Experience

Data Scientist @ ESRI R&D

- Developed deep learning models for Land usage classification in multispectral satellite images. Maintained geospatial data science samples using ArcGIS and deep learning libraries like Tensorflow and PyTorch. Achieved 48% speed gains in data validation checks for spatial data-frames. *May '19 - July '19*

Research Assistant, SBILab, IIIT Delhi

- Mourya, S., Kant, S., Kumar, P., Gupta, A. and Gupta, R., 2018. LeukoNet: DCT-based CNN architecture for the classification of normal versus Leukemic blasts in B-ALL Cancer. *arXiv preprint arXiv:1810.07961*. *Feb'18- March'19*
- Classification of Normal versus Malignant Cells in B-ALL White Blood Cancer Microscopic Images, challenge selected at IEEE ISBI '19, Venice, Italy.

Deep Learning Engineer, Predible Health

- Developed training and data pipeline for Lung nodule segmentation from CT scans. Built a proof of concept for classifying cancerous vs non-cancerous nodules via Radiomics data. *Aug '17 - Dec '17*

Data Science Intern, Pitney Bowes

- Worked on deep learning systems for image segmentation (parsing clothing items in fashion photographs). Built a cross category cloth recommender system which recommends clothing combinations. *Jan '17 - June '17*

Software Developer Intern, ***Google Summer of Code****, Portland State University (PSU)* *May '16 - Aug '16*

- Extended Cyvlfeat: Contributed to a high-performance Python/Cython wrapper of computer vision library, VLFeat. (Algorithms specializing in image understanding and local features extraction and matching. E.g. SIFT, hierarchical k-means, SLIC). In 3 months, added 13 new features to the library.

Full Stack Developer, Intern, Spark Infosystems *Jun'15 - Aug '15*

- Developed an enterprise software (Modules: Admin, Employer, Jobseeker, Test Series) which not only helped the clients to automate workforce hiring but also significantly reduced the hiring time.

Achievements and Awards

- 'Exploring PyTorch for medical Imaging', workshop selected at Pycon UK conference '18
- 'Scientific computing using Cython', talk selected at EuroScipy '18, PiterPy '18 and PyData '17
- 'Scientific computing using Cython', talk delivered at Pycon India '17, Europython '17, FOSSASIA '17

Skills and Interests

- Languages: **Python**, **Cython**, Matlab, PHP, HTML, CSS, SQL | Frameworks: **PyTorch**, **FastAI**, Java, Caffe, Keras, Git, ArcGIS