Mandar Deshpande

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Education

- **University of California, Los Angeles** — Los Angeles, CA
  Masters of Science in Electrical and Computer Engineering — Expected June 2021
  Focus Area: Machine learning and computer vision
- **Visvesvaraya National Institute of Technology** — Nagpur, India
  Bachelor of Technology in Electrical and Electronics; CGPA:8.73/10 — August 2013 - May 2017

Programming Skills

- **Languages**: : Python, Java, C, Javascript
- **Libraries**: : TensorFlow, PyTorch, OpenCV, Numpy, Pandas

Experience

- **Visual Machines Group (UCLA)** — Los Angeles, CA
  Graduate Researcher — October 2019 - Present
  - Tumor cell detection and localization using deep learning on CT scans
  - Using Mask Region based Convolutional Network (Mask-RCNN) for this task
- **Citi** — Pune, India
  Machine Learning Engineer — July 2017 - June 2019
  - Solved OCR use-cases with deep learning and traditional vision techniques on text images
  - Utilized NLP for parsing financial documents and extracting relevant information to bring down man-hours by 40%
- **Google Summer of Code - Mentor** — Pune, India
  TensorFlow — March 2019 - August 2019
  - Mentored the development of Random Network Distillation(RND), a bonus-based reinforcement learning algorithm
  - Verified RND in MountainCar-v2, a hard-exploration environment

  Gensim — May 2018 - August 2018
  - Guided the neural networks for similarity learning research in Gensim, a topic modelling library
  - Benchmarked map score of 0.6463 using MatchPyramid on WikiQA test set

  Scilab — May 2018 - August 2018
  - Mentored the development of Scilab native ML toolbox and Cloud integrated ML toolbox
- **Google Summer of Code - Student Developer** — Nagpur, India
  Scilab — May 2017 - August 2017
  - Integrated Jupyter with Scilab which allowed remote execution of model training in Python over network
- **Citi** — Pune, India
  Software Engineering Intern — May 2016 - July 2016
  - **Report Configuration Utility**: Developed a Jasper report configuration tool for the Global Concentration Engine (GCE) which reduced developer workload by 6 hours weekly

Selected Projects

- **Pixelwise Image Completion**: Developed a flavor of Residual Networks in TensorFlow for image in-painting on medical imaging in collaboration with IVPL Lab at Northwestern University
- **Object Detection and Localization using SSD**: PyTorch implementation of Single Shot Detectors for YOLO and Multi-Box SSD
- **Meta-heuristic Algorithms for Fault Location Estimation**: Researched nature based algorithms to estimate fault location on transmission lines and Maximum Power Point (MPP) Tracking of solar PV

Research Papers

- **Depression Detection using Emotion AI**, Mandar Deshpande, Vignesh Rao
  IEEE International Conference On Intelligent Sustainable Systems 2017, ISBN:978-1-5386-1959-9