SHREYAS FADNAVIS

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Education

Indiana University Bloomington
Bloomington, Indiana

M.S. in Data Science — *Aug. 2017 - PRESENT*

- Bayesian Theory and Data Analysis, Machine Learning, Deep Learning, Multivariate Data Analysis, Computer Vision, Analysis and Design of Algorithms
- Kelley School of Business (MBA courses): Consumer Insights, Venture Strategy

Pune Institute of Computer Technology
Pune, India

B.E. in Computer Engineering — *Jul. 2013 - Jul. 2017*

- Relevant Coursework: Data Mining, Business Intelligence and Analytics, Artificial Intelligence, Database Systems

Experience

Google
Mountain View, California

Python Software Foundation: Summer of Code Candidate — *April 2018 - PRESENT*

- Model Fitting and model selection to explain the data and parameters for estimable Diffusion Tensor Imaging
- Mathematical Optimization techniques to Improve the Machine Learning Modules for Microstructure Crossings in the Brain
- Stochastic Search utilizing Genetic Algorithms (GA) for approximating exponential Time Series models

Indiana University: IGWS
Bloomington, Indiana

Software Developer — *May. 2018 - PRESENT*

- Working on developing the Data Visualization framework using JavaScript: D3JS
- Developing the backend for streaming real-time data and analysis

Kelley School of Business
Bloomington, Indiana

Graduate Assistant (under Prof. Trent Williams) — *Dec. 2017 - April 2018*

- Time Series Analysis of Swedish Economic and Financial Data
- Research on Venture Strategies, Organizational Innovation and Data-Driven Marketing

Indian Institute of Tropical Meteorology
Pune, India

Research Associate — *Jan. 2017 - Aug. 2017*

- Performed Statistical Analysis and Feature Engineering of Large Gridded Data using R, Python and FORTRAN
- Developed a high accuracy cumulus parameterization module for Predictions and Re-Analysis of Geo-spatial Data

Juelich Supercomputing Center (Institute of Advanced Simulations)
Juelich, Germany

Research Associate — *Jul. 2016 - Oct. 2016*

- Parallelized various simulation models on the JURECA (Exascale Supercomputer) using OpenMP and MPI
- Optimized Code using Scalasca and Improved Scheduling using Simple Linux Utility for Resource Management (SLURM)

Autolitix Technologies
Pune, India

Data Scientist — *Dec. 2016 - Aug. 2017*

- Developed an Intelligent Ticketing and Issue Management product using NLP, Machine Learning and Graph Databases
- This domain agnostic plug-in system which is now used by Direct Mutual Funds, Insurance and Travel Service Companies

LiveHealth
Pune, India

Software Development Intern — *Dec. 2015 - Feb. 2016*

- Performed Data Integration and Mining on live on-line data for Healthcare Providers using CrossfilterJS and NodeJS
- Developed Coordinated Views for Fast Multidimensional Filtering of multivariate datasets using D3JS

Nitor Infotech
Pune, India

Solution Architecture Intern — *Jun. 2015 - Oct. 2015*

- Created a Predictive Analytics Framework for Patient Care and Chronic Disease Management using AzureML and R
- Enhanced Hospital Administration and Supply Chain Efficiency for the client using Python integrations

Technical Skills

- **Programming Languages:** C/C++, Scala, Python, Haskell, JavaScript, Lisp, Scheme, Clojure
- **Databases And Distributed Systems:** Hadoop-Ecosystem, Apache Spark, MongoDB, MySQL, Cassandra, Neo4j, HiveQL
- **High-Performance Computing and Parallel Programming:** OpenMP, Message Passing Interface(MPI), CUDA, Julia
- **Machine/ Deep Learning and Data Mining/Statistics:** R, Matlab, Scikit-learn, Theano, NLTK, WEKA, Caffe, Spark (MLlib)
- **Cloud Computing Platforms:** Openstack(Nova Compute), Azure (ML and Stream Analytics), Amazon (Kinesis) and Google Cloud Platform(Big Data and ML stacks)

Projects

Machine Generation and Modeling Polyphonic Sequences using Wavenet Autoencoders — *Indiana Univeristy Bloomington*

UNDER PROF. MINJE KIM — *Jan. 2017 - May 2018*

- Worked on a research project that generates a symbolic prior from high-dimensional polyphonic music using Deep Boltzmann Machines. This prior was combined with a Style Transfer and Nynth: WaveNet Autoencoders to improve music generation quality.

Generating User Feedback: Emotion Detection from Facial Expressions using Deep Learning and Collaborative Filtering — *Indiana Univeristy Bloomington*

UNDER PROF. DAVID CRANDALL — *Jan. 2017 - May 2018*

- Developed a Deep Learning framework for capturing Facial Expressions using Facial Action Coding System in Real-Time. Further performed Time-Series analysis using Moving Averages and Jenks Natural Breaks Optimization. Collaborative Filtering was used along with Random Forests to generate live feeddback.

Visual question Answering System using Deep Learning — *PICT*

BACHELOR'S DISSERTATION PROJECT AND THESIS — *Jul. 2013 - Jul. 2017*

- Implemented a Multimodal Question Answering framework for contextual data using Deep CNNs and LSTMs to answer open-ended questions using TensorFlow, Keras, Caffe.

Awards

2017 **Data Science Fellowship**, Indiana University Bloomington — *MS - Data Science*

Scientific Publications

2017	**Maximizing Information of Severe Weather Events Retrieved from Satellite Images**, International Journal of Engineering Research and Applications	*ISSN : 2248-9622*
2015	**Optimal Partitioning Methods for Image Segmentation**, IET - Journal of Engineering	*ISSN : 2051-3305*
2014	**Image Interpolation Techniques in Digital Image Processing**, International Journal of Engineering Research and Applications	*ISSN : 2248-9622*
2014	**Round off Error Propagation in Simulation of RC Circuit**, Advances in Computing and Information Technology	*ISBN : 978-981-07-8859-9*

Book on Customer Relationship Management

under Marc O'Brien, CEO ProjectLibre — *California, United States*

(UNDER PUBLICATION) — *Jul. 2016 - Present*

- Influencers and Mental Models with Consumer Behaviours mapped to Human Psychology
- Data Analytics from the perspective of Changing the SDLC (Boston Matrix Concepts)