Mehak Beri

4600 Monterey Oaks Blvd, Austin, TX 78749 | (737)4002343 | mehakberi1996@gmail.com
https://www.linkedin.com/in/mehakberi | https://github.com/MehakBeri | Work Authorization: H1B VISA

EDUCATION

- **Master of Science,** Computer Science, The University of Texas at Dallas
  GPA- 3.89/4.0 | Graduated: Aug 2019
- **Bachelor of Engineering,** Electrical and Electronics Engineering, Panjab University, Chandigarh, India
  CGPA- 8.33/10 | Graduated with Honors: May 2016

PUBLICATIONS

- Rotation Direction Control by Finger Movement, 2014 IEEE ICCIC — Dec 2014
  IEEE Xplore: Catalog Number: CFP1420J-ART | ISBN: 978-1-4799-3975-6
- Intelligent Floating Car Parking System, 2014 RATEE — Dec 2014
  ISBN: 978-93-84869-05-2/323

SKILLS

Python (Numpy, Pandas, Scikit-learn, Scipy, matplotlib, seaborn), Java, Data Science (Statistics, Exploratory Data Analysis, Data Wrangling, Data Visualization, Data Science Pipeline, Feature Engineering), Machine Learning (Algorithms, WEKA, Keras, Tensorflow), Deep Learning (Convolutional Neural Networks, LSTM), Natural Language Processing, Information Retrieval, SQL, MongoDB, InfluxDB, Grafana, Python Flask, Dash, HTML/CSS

EXPERIENCE

- **Machine Learning Engineer | Samsung SARC** — Aug 2019 - Present
  - Responsible for Machine Learning activities across CPU and GPU domains. Responsibilities include communicating across teams, understanding requirements, managing and coding machine learning applications utilizing regression, clustering, classification, deep learning etc.
- **Machine Learning Intern | Inzone.ai** — May 2019 - Aug 2019
  - Improved Inzone Platform's Regressor and Classifier by adding early stopping, graphical evidence, custom evaluation metrics and custom loss functions. All capabilities replicated using Keras as well as Tensorflow
  - Simplified and Improved platform analyzer. Functionality added: Hyperparameter tuning capability via config files, heatmap visualization of correlation, trellis chart for pre processing, data cleanup functions, outlier detection and distribution skewness. Added hyperparameter tuning capabilities to the platform using Grid Search
  - Deployment and testing improvements made to platform. Created executable using pyinstaller to enable platform to run without python version or OS compatibility issues
- **Machine Learning Intern | Natel Energy | Upstream Tech** — Jan 2019 - May 2019
  - Implemented Convolutional Neural Networks on Satellite Imagery and extracted different band information by extrapolation from given satellite images
  - Aim of the project was to plug the information gap between satellite imagery from Sentinel-1 and Sentinel-2 using historical images from these satellites taken over a variety of terrains and seasons
- **Machine Learning Intern | Samsung SARC** — May 2018 – Jan 2019
  - Machine Learning for Seed placement & PIML Data (Weka, TensorFlow, Python):
    Analyzed the semiconductor chip production data (>20K dimensions) at unique design flow steps and recommended register seed placement coordinates to yield better success parameters at the end of flow
  - Time Series Data Modelling (InfluxDB, Grafana):
    Condensed data at SARC from various sources and design processes to create time series analytics platform. Enabled data visualization, data pre processing and user specific data operations
  - Interactive Data Analysis and Visualization Dashboard (Python, Flask, Dash, MongoDB)
- **Full Stack Programmer | UTD Center for Brain Health** — Oct 2017 – May 2018
- **Software Engineer | Seekhley, Gemini Solutions, Gurgaon, India** — Jan 2016 – Nov 2016

PROJECTS

- **Lennox Ultimate Data Science Challenge | Winner DSC 2019**

Deployed solution using heroku which provide insights to Lennox on how to optimize marketing investments and recommendations for the location of new openings. Pre-processed data with Pandas and scikit-learn. Used Weka, and Python Plotly for exploratory data analysis and feature engineering. Predictions models built using TensorFlow, Keras and xgboost

- **Mortgage Risk Analytics Engine | Winner HackUTD**
  Built solution to predict mortgages (98% accuracy) that will be foreclosed on or paid off early. End product was a Bokeh app for end user to acquisition values to predict the viability of that property acquisition

- **Machine Learning Independent Research | UTD CS Department** Jan 2018 – May 2018
  Computational Ethics **:** Creating machine learning powered, and human annotated solution to solve ethical dilemma scenarios, particularly in an emergency setting for a search and rescue robot using WEKA & Python
- **Mask IT | IOT + Machine Learning + MEAN | Winner OneM2M Hackathon**
  Solution to air pollution using real time communication with IOT sensors using perceptron machine learning trainer for decision making || OneM2M protocol, Python, Express, NodeJS
- **CHAI | Machine Learning + Natural Language Processing | Submitted at Hack Princeton**
- **IAPS: Suicide Prediction in India | Machine Learning:** Aims to predict the probability of a death being a suicide based on the data collected about the victim. 82% accuracy achieved by Bayesian networks || Weka
- **Machine Learning Projects**
  Implemented Independent Bayesian Network, Tree Bayesian Network, Mixture of Tree Bayesian Network using Expectation Maximization , Collaborative Filtering on Netflix Ratings , K Means Clustering for image compression , Email Spam Classifier**,** Decision Tree in Java and Python
- **Semantic Search Application | Natural Language Processing:** Enables keyword based search, semantic search index creation on news article corpus. Uses Part of speech tagging, syntactic parsing and feature extraction

ACCOMPLISHMENTS

- Won 2nd Place in Ultimate Data Science Challenge (Total teams: 124) April 2019
- Won 2nd Place in Sponsored Prizes at HackUTD (Sponsor: Fannie Mae) Feb 2019
- Won 2nd Place in OneM2M Hackathon organized at UTD, Dallas Mar 2018
- Conferred IEEE Outstanding WIE Student Volunteer Award Feb 2015