Sara Alizadeh

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SUMMARY

Master's degree in electrical & computer engineering, and +4 years of experience in software industry, data analytics, modeling, building end-to-end machine learning web applications, productionizing at scale and Big Data technologies.

TECHNICAL SKILLS

Languages: Python(Pandas, NumPy, Seaborn, SciKit-Learn, TensorFlow, Keras, NLTK, Matplotlib), SQL, Spark(PySpark, SparkMLlib, SparkSQL, Koalas), Bash, JavaScript, JSON, XML, HTML, C++, Matlab

Tools: Git, Linux, API's, Flask, Django, Docker, AWS(EC2, S3, EBS, Aurora, ELB, IAM, EMR), Heroku, Mesos-Marathon, Kubernetes, Tableau, Relational & Non-Relational Databases (Oracle, MySQL, Elastic Search), Big Data (Spark, Hadoop), Jira, Jupiter Notebook, VS Code, OpenCV

Skills: Object Oriented Programming, Version Control, Exploratory Data Analysis, Data Wrangling/Cleaning/Visualization, Feature Engineering, Model Testing/Validation, Deep Learning, NLP, Recommender Systems, Distributed Systems, Web Scraping, Statistical Modeling, State Estimation, Predictive Analytics, Computer Vision, Object Tracking, Scrum master

PROFESSIONAL EXPERIENCE

Lead Software Engineer (Project) - Evertz Microsystems Ltd., Burlington, ON May2018-Current

- Designing and installing end-to-end disturbed Linux based systems in AWS using EC2, S3, Elastic Load Balancer, and Aurora, where repetitive tasks are automated with custom scripts in Python, JavaScript, and SQL. The system runs a MariaDB cluster with SaltStack, Elastic Search, and Mesos-Marathon for orchestration. The software manages media data for customers such as NBC Universal, AMC, and Corus Entertainment.
- Running daily scrum calls and communicating directly with customers to deliver the systems to an agreed specification in an Agile environment.
- Using industry-standard software engineering tools and learning new technologies and translating them into practical use while utilizing fault finding skills to resolve problems.

Research Assistant - ETF (Estimation-Tracking-Fusion) Research Lab - McMaster University, Hamilton, ON Sep2015-Oct2017

- Developed and implemented Bayesian Machine Learning algorithms for estimation, tracking and fusion purposes with application to autonomous vehicles.
- Designed and implemented computationally efficient algorithms for processing video collected from a car-mounted camera to estimate its 3D position robustly and in real-time. [EKF, IMM estimators, Computer Vision, OpenCV, C++, Matlab].

Research Intern - Digital Communication Lab - Amirkabir University of Technology, Tehran June2014-Sep2014

- Implemented and developed different digital communication modulation and coding for speech and image [Matlab].

PROJECTS

- TweetDetective [Python, Twitter API, HTML, NLP, NLTK, Flask, Docker, AWS]

  An end-to-end web application using Flask, Docker, and Elastic Beanstalk by scraping tweets and providing in-depth insights about specific businesses that could save the business owners hours of tweets reading and analyses. NLP methods such as Sentiment Analysis and Topic Modeling are implemented. `https://bit.ly/3an4ACM`
- MovieMe [Python, Spark, Flask, AWS, Collaborating Filtering, ALS]

  An end-to-end web application using Apache Spark, Flask, and Elastic Beanstalk by running a recommender system on the large MovieLense dataset and recommending movies to users. Collaborative filtering with Spark's Alternating Least Squares is implemented. `https://bit.ly/2YuaPiw`
- LendingClub [Python, Neural Network, Keras, TensorFlow, Tensorboard]

  Implemented a Deep Learning model using Keras and Tensorboard to predict future customers' behavior from historical financial data, achieving an error rate of 8%.
- Cancer Diagnosis [Python, Pandas, Numpy, Regression, PCA]

  Created a regression algorithm to predict breast cancer.To overcome the challenge of dealing with 40 variables, the PCA method for dimensionality reduction and hyper parameters tuning are utilized.

EDUCATION

***Master's of Applied Science*, Electrical & Computer Engineering** - McMaster University, Hamilton, ON 2015-2017

Thesis: *"A Novel Filtering Approach in Visual Odometry for Autonomous Ground Vehicles Application"*

Relevant Courses: •Algorithm Parameters and State Estimation •Matrix Computation in Signal Processing •Engineering Optimization •Probability and Random Process •Tracking and Sensor Fusion

HONORS: •Recipient of full scholarship for M.A.Sc •International Excellence Award

***Bachelor's*, Electrical Engineering** - Amirkabir University of Technology, Tehran 2011-2015

Thesis: *"On the Use of the Stockwell Transform for Image Compression"*

Relevant Courses: •Signal and Image Processing •Digital Communication •C++ Programming

HONORS: •Recipient of full scholarship for B.Sc