SALMAN SHAH

MACHINE LEARNING ENGINEER

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SKILLS

GENERAL: Machine Learning, Software Engineering, Data Science
PROGRAMMING LANGUAGES: Python (advanced) | C#, ASP.NET, SQL (Intermediate) | C++, jQuery, HTML, CSS (beginner)
KNOWLEDGE: Machine learning, linear algebra, mathematical modeling, data analysis & visualization
TOOLS: Scikit-learn, Pandas, SQL, Flask, Keras, Tensorflow, Matplotlib, Git, Visual Studio, Vim

EXPERIENCE

MACHINE LEARNING ENGINEER — WIDE MERCHANT GROUP | SEP 2019 - MAR 2020

- Deployed into production a machine learning based web application that increased underwriting efficiency by 25%
- Developed several text classification ML models using scikit-learn that tag bank transactions and summarize information
- Engineered both frontend & backend of the final ML product using Flask & Python and deployed into production on IIS
- Designed and deployed an API using C#, ASP.NET & SQL to provide restricted data access to mobile developers

SOFTWARE ENGINEER — XSCAPE GAMES | JUN 2019 - MAR 2020

- Engineered a controller system using Pygame to wirelessly drive an RC car through a driving simulator
- Engineered a motion control system that responds to telemetry data and simulates the RC car driving experience
- Finalized a demonstrable working prototype for the company's product

COMMERCIAL UNDERWRITER — WIDE MERCHANT GROUP | JUL 2018 - FEB 2019

- Generated cash advance offers by balancing the risks and profitability of small businesses through document analysis
- Worked closely with the underwriting & software engineering team to implement system changes that encourages data based decision making
- Established and maintained positive relationships with sales agents to bring in and close large funding deals

MACHINE LEARNING PROJECTS

IMAGE SUPER-RESOLUTION — CAPSTONE PROJECT at SPRINGBOARD | DEC 2019

- Designed and trained a residual neural network to increase the resolution of images 2x while preserving 90% of its quality
- Built a trainable image dataset from scratch with python using web scraping and image processing libraries
- Deployed the model online to be used as a free service
- **SKILLS USED:** Keras, tensorflow, flask, python, HTML, CSS, web scraping, image processing, neural network

AI UNDERWRITER — PERSONAL PROJECT | JUN 2019

- Developed a small-scale merchant cash advance underwriter in Python by using random forests and adaptive boosting
- Designed a process for generating realistic, easy-to-label, synthetic data using random number generators and built a synthetic dataset from scratch
- **SKILLS USED:** Pandas, scikit-learn, matplotlib, python, random forest classifiers, adaptive boosting

SENTIMENT ANALYSIS — PERSONAL PROJECT | APR 2019

- Explored sentiment classification on a movie review dataset using naive Bayes classifiers, SVMs, and neural networks
- Evaluated and optimized hyperparameters for each model
- Detailed the results, implementation, and recommendations on a blog post
- **SKILLS USED:** Scikit-learn, pandas, matplotlib, python, support vector machines, naive bayes, neural network

AUTOENCODER — GROUP PROJECT at UCLA | JUN 2018

- Engineered a standard autoencoder using Keras to encode and decode images from the MNIST dataset
- Implemented gaussian mixture sampling within the latent space to generate images of handwritten numbers
- Completed an extensive report on our findings, understanding, and implementation (see website for paper)
- **SKILLS USED:** Keras, matplotlib, python, Gaussian mixtures, neural network, data visualization, dimensionality reduction

EDUCATION

CERTIFICATION, MACHINE LEARNING ENGINEERING CAREER TRACK — SPRINGBOARD | EXPECTED MAY 2020
BACHELOR'S OF SCIENCE, MATHEMATICS — UNIVERSITY OF CALIFORNIA LOS ANGELES | JUN 2018
CERTIFICATE OF SPECIALIZATION IN C++ PROGRAMMING — ORANGE COAST COLLEGE | SEP 2016