HOOMAN SHIRANIMEHR
MACHINE LEARNING ENGINEER

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SUMMARY

Data Scientist and machine learning engineer with a PhD in electrical engineering and over 10 years of experience working for fortune 500 companies doing quantitative analysis and statistical modeling. Skilled in Python, R, SQL, Power BI, and Tableau. Knowledgeable in AWS and cloud computing.

EDUCATION

University of Illinois, Urbana-Champaign Sept. 2017 - Current
M.S. Computer Science
GPA: 4.0

Springboard Apr. 2020 - Nov. 2020
Data Science Bootcamp

University of Southern California Sept. 2006 - May 2010
Ph.D. Electrical Engineering

University of Southern California Sept. 2002 - May 2006
M.S. Electrical Engineering

Sharif University of Technology Sept. 1997 - June 2001
B.S. Electrical Engineering

EMPLOYMENT

Neal Analytics, *Senior Machine Learning Engineer*, Bellevue, WA Dec. 2020 - Current
• Explored convolutional neural networks for image segmentation, tracking and quality control in a manufacturing process.
• Utilized natural language processing techniques to classify insurance documents.

Microsoft Corporation, *Senior Engineer*, Redmond, WA Aug. 2016 - Dec. 2019
• Evaluated third-party patent portfolios (~1,000 patents) by performing high-level analysis, estimating the likelihood of implementation, and assessing future risk to Microsoft products.
• Analyzed Microsoft's connectivity portfolio and classified connectivity patents based on their coverage areas using Excel and Power BI.
• Led cross-organizational efforts in investigating opportunities for licensing Microsoft patents.

Intel Corporation, *Senior Engineer*, Hillsboro, OR Apr. 2010 - Aug. 2016
• Investigated different techniques including K-means clustering and DFT for codebook design.
• Derived a machine learning model for wireless systems using unsupervised learning with dimensionality reduction and published the results in IEEE GLOBECOM 2013.
• Obtained performance data in various cellular system deployments using MATLAB and C++.

University of Southern California, *Research Assistant*, Los Angeles, CA May 2006 - May 2010
• Studied different machine learning models for channel estimation and signal detection in wireless systems.
• Developed an algorithm based on stochastic optimization and game theory to optimally select users and manage interference in cellular systems and published the results in IEEE Transactions on Communications.

SKILLS

TOOLS AND TECHNOLOGIES: Python, R, SQL, MATLAB, C++, Tableau, AWS, Power BI, Apache Spark, REST Messaging, Lambda, S3, Kubernetes, EC2, Flask, Databricks, Jupyter Notebooks

PROJECTS

COVID-19 detection
Utilized CNN-based models to analyze patients' chest X-ray images and detect presence of COVID-19.

Quora insincere question classification
Developed models in Python to identify and flag insincere questions.

Skin cancer diagnostics
Studied classification models in R for skin cancer diagnostics and achieved 80% accuracy in predicting malignant (cancerous) skin mole.

Chatbot
Built a chatbot with AWS Lex to find the shortest distance between two cities.

Stock price prediction
Investigated prediction models for stock prices using regression analysis.

AWARDS

Recognition Award for Outstanding Contributions, *Microsoft* 2018
Spontaneous recognition award, *Intel* 2011