ZIYUAN SHEN

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Objective: Data Scientist/Data Analyst Full-Time Position

LinkedIn Profile: `https://www.linkedin.com/in/ziyuan-shen-847076184/`

Portfolio: `https://ziyuan-shen.000webhostapp.com/`

EDUCATION

Duke University *August 2018 - May 2020 (expected)*

Master of Science, Electrical and Computer Engineering

Overall GPA: 4.00/4.00

Relevant coursework & projects:

Statistical Programming; Medical Deep Learning; Probabilistic Machine Learning; Pattern Classification and Recognition Technology; Data Science and Health; Vector Space Methods with Applications; Fundamentals of Computer Systems and Engineering;

Southeast University *September 2014 - June 2018*

Bachelor of Engineering, Information Science and Engineering

Overall GPA: 3.72/4.00

Relevant coursework: Fundamentals of Computer Science (C++); Data Structures, etc

EXPERIENCE

Duke Institute for Health Innovation May 2019 - Present

Data Analyst *Durham, NC, United States*

· Internship at DIHI to work with ongoing machine learning projects related to healthcare. I use data science technologies to manipulate large-scale hospital data, and develop predictive models for clinical use.

National Mobile Communications Research Laboratory March 2015 - June 2018

Research Assistant *Nanjing, Jiangsu, China*

· Conduct DNA computing research regarding DNN (Deep Neural Network), Markov chain computation and digital logic synthesis.

TECHNICAL STRENGTHS

Computer Languages	Python, SQL, Shell Scripting, AWK, R, C++, LaTex, Markdown
Databases & Visualization	PostgreSQL, SQlite, Pandas, Seaborn, Matplotlib, R Markdown
Machine Learning	NumPy, Scikit-Learn, TensorFlow, Keras

PROJECTS & PUBLICATIONS

Recent Research & Projects Machine Learning, Precision Medicine

· **TensorFlow Open Source Contribution:** Add SPIE-AAPM-NCI breast cancer whole slide image dataset to TensorFlow datasets.

· **Adult Inpatient Decompensation Prediction:** This project aims to initialize machine learning models for predicting adult inpatients' decompensation (ICU admission, mortality, RRT events, etc). The ultimate goal is to reduce patients' deterioration and standardize hospital response protocols.

· **30-Day Hospital Readmission Prediction:** Predict hospital readmission for early identification of high risk patients and better managing hospital resources.

· **Breast Cancer Prediction:** Classify breast cancer subtypes using Breast Cancer Wisconsin Dataset.

Selected Publications DNA Computing, Molecular Programming

· [2019-01-25] Molecular Computing for Markov Chains, *Springer Journal of Natural Computing*

· [2019-01-03] Synthesizing a Neuron Using Chemical Reactions, *IEEE International Workshop on Signal Processing Systems*

· [2017-10-10] Molecular Synthesis for Probability Theory and Stochastic Process, *Springer Journal of Signal Processing Systems*