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Fu-Chang Sun

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Objective

Aspiring Data Scientist who converts data into insights supported by statistical evidence using machine learning algorithms

Education

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| Doctor of Philosophy in Physics | May 2017 |
| University of Connecticut (UConn), Storrs, CT | |
| Master of Science in Physics | January 2010 |
| University at Buffalo (UB), Amherst, NY | |
| Bachelor of Science in Math and Physics (Double Major) | June 2006 |
| National Cheng Kung University (NCKU), Tainan, Taiwan | |

Technical Skills

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- Shell Scripting, Python, pandas, Scikit-Learn, Machine Learning, Data Visualization, Statistical Modeling, SQL, Plotly, C/C++ , Matlab, Unix, Hadoop, MapReduce, Spark

Project Experience

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| Capstone Project of Nanodegree Program at Udacity | in progress |
| <ul style="list-style-type: none">• Use recommendation technique by collaborative filtering, content-based filtering, and neural net approaches to answer "Which products will a consumer purchase again?" | |
| Machine Learning Nanodegree Program at Udacity | July 2017 |
| <ul style="list-style-type: none">• Applied statistical analysis tools to predict housing prices and evaluate the predictive model by grid search technique to optimize a learning algorithm• Utilized supervised learning models such as Decision Trees, SVMs, Neural Networks to target potential financial contributor using relational database• Identified patterns and structures in unlabeled data of wholesale distributor's service using unsupervised learning technique and unveil its clustering for new prediction• Implemented reinforcement learning algorithm (Q-learning) for optimal decision and convolutional neural networks for image classification | |
| Materials Hackathon (MatHack) at MRS Fall Meeting & Exhibit | December 2015 |
| <ul style="list-style-type: none">• Received the <i>Third Place of Materials Hackathon</i> by automatically collecting materials crystallographic data from multiple databases• Awarded as <i>Special Prize for Materials Data Challenge</i> by sustainable and extensible research project embedding in the commercialized server | |

Work Experience

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| Research Assistant | September 2013 – January 2017 |
| Department of Materials Science & Engineering, UConn | |
| <ul style="list-style-type: none">• Conducted and published scientific research on ferroelectric materials using computational modeling in quantum, classical, and continuum time and length scale• Designed the model and analyzed the simulation results of ferroelectric devices with different stacking geometry to explain experiment observation | |
| Lab Instructor, Teaching Assistant | September 2010 – May 2013 |
| Department of Physics, UConn | |
| <ul style="list-style-type: none">• Motivated student engagement by creating in-class activities and prompting discussions• Encouraged students to develop critical thinking skills with various experiment setup | |