Yu Lin

More than fifteen years data science leadership plus five years in healthcare with in-depth knowledge and hands-on coding experience in solving real-world business problems with advanced data science, analytics and computing technology. I am driven by finding good and simple solutions to hard problems through best practices, fail fast exploration and a deep interest in learning new things. Seeking career advancement opportunities into senior technology leadership role, to achieve high impact business value through technology driven innovation and transformation.

Singapore

- Email me on Indeed: http://www.indeed.com/r/Yu-Lin/88d1ba1f4305c782

More than fifteen years data science leadership plus five years in healthcare, two years in business case formation and partnership with in-depth knowledge and hands-on coding experience in solving real-world business problems with advanced data science, analytics and computing technology. I am driven by finding good and simple solutions to hard problems through best practices, fail fast exploration and a deep interest in learning new things. I am interested in finance analysis. Seeking career advancement opportunities into senior technology leadership role, to achieve high impact business value through technology driven innovation and transformation.

Work Experience

Data Scientist (Secondee from A-STAR)

Peach Intellihealth Pte Ltd - Singapore

July 2017 to Present

Managerial and team lead function
· Engage senior leadership in digital transformation through technology and data analytics on evaluating solutions for possible adoptions.
· Develop internal analytics capability and awareness.
Technical specialist, architect, and development role in building value-added business solution
· Business process automation – utilizing advanced machine learning technique to automate manual workflow for improved operation efficiency and robustness and quality of service.
· Google analytics – Using google analytics to derive data-driven market sentiment and behavior analysis from App usage data.
· Workflow automation – Employ machine learning prediction to automate delivery predictions every 2 hours without computing delays.
· Predictive analytics – Predictive modeling for proactive intervention.
· Recommendation– Recommend intervention opportunity for improving patient outcome.
· Advanced data visualization – business statistics visualization, clustering and grouping, trend analysis.
· Conduct SMOTE test and regression test – Conduct SMOTE and regression tests to ensure software performs the same as proposed and enhanced user experience.

Data Scientist

Agency for Science Technology and Research (A*STAR) - Singapore

July 1995 to Present

· Lead and hands-on Research and Development of data analytics solutions to solve research and industry problems.
· Predictive analytics – Predictive modeling of machine health index for proactive intervention.
· Recommendation– Recommend repair opportunity for improving continuous operation.
· Selected projects
o Work with client and industry network on collaborative data science project.
o Building of iPredict Machine learning software Platform in Python: Regression: decision tree regressor, Support Vector Machine (SVM), and KernalRidge Regressor, Classification: Naïve Bayes, Decision Trees, AdaBoost, Random Forest, SGDC and SVM and Logistic Regression and Clustering: K-means, Gaussian Mixture Clustering. Compare the performance and choose the best model.
o Machine learning based 3D printer conditional monitoring.
o Machine failure prediction and anomaly detection for high power cables using sensor data using Decision tree, random forest, and ELM.
o Comparing regression with classification for multi-class, multi-label classification imbalanced data for continues progressing labeling problem.
o Route optimization software tool using artificial Intelligence algorithms (such as k-means clustering, genetic algorithm, simulated annealing).
o Predictive analytics in sensor-based healthcare wearable devices. Feature engineering, anomaly detection, PCA analysis, pattern recognition.
o ultra-high-density recording channel modeling and modeling software development.
o knowledge-based expert system.
· Program management and technical leadership
· IP generation (over 30 scientific publications), training and consultation
· End-to-end project lifecycle management – proposal, budgeting, requirement specification, procurement, progress tracking, evaluation and delivery.

Project Manager (Secondee from A-STAR)
Intellectual Property Exchange Pte Ltd
February 2006 to February 2008

Managerial and team lead function
· Lead and development of industry licensing solutions
o Strategic consulting including proposing solutions, business plan and sales strategy to solve customer problems.
o Partner with industry partner to identify needs, co-develop problem statements, and architect solutions.
o Lead and development of customer royalty solution and a revenue share solution
o Planning on the business model and operation solutions
o Manage external outsource teams and internal technical development team to work together to deliver solutions.
o UAT pilot evaluation before launch of the two solutions
o Successfully delivered and licensed two solutions to a local telco on time and on budget
· End-to-end project lifecycle management – proposal, budgeting, requirement specification, procurement, progress tracking, evaluation and delivery.
· Technical consultation and assistance to business case making, guideline and roadmap development

Visiting Scientist
Philips Research
March 2001 to June 2001

Developed a featured machine learning algorithm and software for designing adaptive filter for mass production. The algorithm optimizes the filter on the fly.

Education

PhD in Electrical and Computer Engineering
National University of Singapore - Singapore
1995 to 2003

Master of Engineering Degree (NUS Scholarship) in Electrical and Computer Engineering
National University of Singapore, - Singapore
1992 to 1995

B. Sc. degree (1st class honor scholarships, Excellent Student Award, Excellent Graduate Award) in Engineering,
Jinan University - Guangzhou, China
1988 to 1992

Skills

Project Management, Project Plan/Business Plan Creation, Microsoft Project Manager. Machine Learning, Python, Sklearn, Matlab, Signal Processing, Biomedical Signal Processing, Image processing, Perl, PerlDL, Linux, Gnuplot, PHP, HTML,Microsoft Word, Microsoft Power Point. (10+ years)

Links

https://www.linkedin.com/in/maria-lin/

Certifications/Licenses

Udacity Machine Learning Engineer Nanodegree
May 2019 to Present

Supervised Learning: Model Selection, Model Evaluation and Optimization, Linear Regression, Logistic Regression, Naïve Bayes, Decision Trees, Support Vector Machines, Ensemble Methods

Unsupervised Learning: Clustering, Feature Scaling, PCA, ICA

Advanced Machine Learning: Neural Networks, Cloud Computing, Deep Neural Networks, Convolutional Neural Networks, Reinforcement Learning (RL), Monte Carlo Methods, Policy-Based Methods

Projects:
· Predicting Boston Housing Prices: using decision tree regressor, Support Vector Machine, and KernalRidge Regressor to predict boston housing price, using GridSearchCV to optimize hyper parameters and compare and choose the best model to predict housing price.

· Finding Donors for CharityML: normalized input features, choose classifiers from Gaussian Naïve Bayes, Decision Trees, AdaBoost, Random Forest, SGDC and SVM and Logistic Regression, compare the performance of SGD, AdaBoost and Decision Tree and choose the best model based on F-score. Optimize the best model, evaluate the feature importance ranking.
· Creating Customer Segments: create customer cluster using Gaussian Mixture, K-Means clustering, Cluster customers into wholesale and retail segments
· Dog Breed Classifier: Using keras CNN to classify dog breed.
· Time Series Predictions: Financial Analysis and using machine learning to improve trading policy to optimize return of investment (ROI) and comparison of ROI, Sharpe Ratio and Sortino Ratio with buy-and-hold strategy.

Additional Information

Written Language: English and Chinese.
Spoken Language: English, Chinese Mandarin and Cantonese.

Hobby: Swimming, table-tennis, driving, travel.