Liam Bui

⦿ Vancouver, BC ✉ liam_bui@outlook.com 🔗 https://linkedin.com/in/liambui

TECHNICAL SKILLS

- **Machine Learning**: Scikit-learn, Tensorflow, NLTK
- **Big Data**: Hadoop, Spark, Hive, Cassandra, MongoDB
- **Programming**: Python, Scala, Java, JavaScript
- **Statistical Analysis**: R, SAS
- **Visualization**: Qlikview, Tableau, D3.js
- **Others:** SQL, AWS, Cloudera, GIT, JIRA

PROFESSIONAL EXPERIENCE

Machine Learning Engineer (Intern) – Armourgel, Burnaby, BC   Sep 2017 – Dec 2017

- Research signal processing and machine learning algorithms for activity recognition and fall detection based on biomedical signal data collected from wearable sensors

Data Scientist (Intern) – PHEMI, Vancouver, BC   May 2017 – Aug 2017

- Developed distributed data processing and analytics prototypes using Spark (Scala) and Hive to demonstrate fast query and analytics on terabytes of clinical data
- Proposed machine learning and deep learning demos using Python, Scikit-learn and Tensorflow to show how medical imaging data can be analyzed to support diagnosis
- Implemented natural language processing pipeline in Java and cTAKES, a library with both rule-based and machine learning techniques, to extract clinical information from unstructured medical text
- Developed term partitioned index mechanism in Java to enable fast document search in Accumulo

Business Analytics Specialist - DBS Bank, Singapore   Jul 2015 – Jul 2016

- Developed SAS code to extract data from Teradata SQL databases and perform statistical analysis for Card & Unsecured Lending sales and marketing
- Liaised with data science team to deploy predictive models (Recommender System, Location Analytics) for targeted marketing, leading to 2x lift in customer response rate in digital campaigns
- Proposed experiment design and hypothesis testing on different content factors to improve customer engagement in email marketing
- Managed vendors to deliver Qilkview dashboards for marketing metrics tracking

Data Analyst - DBS Bank, Singapore   Jul 2012 – Jun 2015

- Developed Java analysis reports and Qlikview dashboards to provide technology and operations teams with insight on process improvement and risk control
- Performed process mapping and simulation modelling to optimize business processes, resulting in 10% reduction in operating cost
- Managed modelling team to document enterprise-wide data assets using industry standard notations (ER, UML, BPMN diagrams), leading to consistency and standardization
- Led infrastructure design and deployment for an enterprise data management system

Software Engineer (Intern) - Hutcabb Consulting, Singapore   May 2011 – Aug 2011

- Implemented inventory management and demand forecasting functions in a Decision Support System with Java Servlet to facilitate optimal inventory decision making
- Reduced data processing time by automating Data Extract, Transform and Load (ETL) tasks with Microsoft SQL Server Integration Services (SSIS)

EDUCATION

MSc. Computer Science (Big Data, Machine Learning) - GPA 4.12/4.33   Sep 2016 – Dec 2017
Simon Fraser University, Burnaby, BC, Canada

Liam Bui

 Vancouver, BC   liam_bui@outlook.com   https://linkedin.com/in/liambui

- *Big Data Systems, Big Data Analytics, Machine Learning, Deep Learning, Data Mining, Natural Language Processing, Regression Analysis, Time Series Analysis, Statistical Learning, Visual Analytics*

BEng. Computer Science, BSc. Business Analytics (Double Degree)   Aug 2008 – Jun 2012

Nanyang Technological University, Singapore

DATA SCIENCE PROJECTS

Topic Model and Network Analysis on research publications [Github]   Jan 2017 – Apr 2017
- Developed web scraping function to retrieval publications from major machine learning journals
- Analyzed topic models (Latent Dirichlet Allocation) to explore underlying topics and performed graph analytics to visualize interesting relationship among publication topics
- Technologies: Scala, Spark ML, Spark GraphX, MongoDB, Gephi

Question-Answer Style Chatbot [Github]   Jan 2017 – Apr 2017
- Developed a chatbot using deep recurrent neural network (Sequence to Sequence LSTM) for language models, together with several improvement techniques (Beam Search, Attention Mechanism)
- Developed a web-based user interface for user-chatbot conversation
- Technologies: Python, NLTK, Tensorflow, Flask

Longitudinal study: Effect of tobacco use on mortality [Github]   Jan 2017 – Apr 2017
- Analyzed National Longitudinal Mortality dataset to understand the effect of tobacco use on mortality using mixed model logistic regression and survival analysis (Kaplan-Meier estimator)
- Technologies: R, ggplot2, glm, lme4, survival

All State Claim, Kaggle Data Science Competition [Kaggle]   Sep 2016 – Dec 2016
- Predicted car accident's insurance claim using Linear Regression, Neural Network and Boosted Tree
- Ranked top 20% in the Kaggle competition
- Technologies: Python, scikit-learn, Keras, XGBoost

Online Restaurant Recommender System [Github]   Sep 2016 – Dec 2016
- Implemented Collaborative Filtering Recommender System (Matrix Factorization, Item-Similarity) based on restaurant detail and user rating datasets from Yelp
- Developed a web-based Proof of Concept to demonstrate and visualize the recommender system's result
- Technologies: pySpark, MLlib, Cassandra, Hadoop Cloudera Distribution, Google Map API, D3.js

Facial Expression Recognition in Real-Time [Github]   Sep 2016 – Dec 2016
- Implemented and Benchmarked different models (Principle Component Analysis, Linear Discrimination Analysis, Convolutional Neural Network) to extract features from facial expression images and predict emotion in real-time
- Technologies: Python, OpenCV, Keras, Amazon AWS

Sentiment Analysis on Movie Comments [Github]   Sep 2016 – Dec 2016
- Performed natural language processing and text mining on movie comments using Convolutional Neural Network in Matlab to analyze users' sentiment towards movies
- Technologies: Matlab, Matconvnet, Word2Vec