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Kuan-Liang Liu

kuanliang.github.io
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Technical Skills

Programming languages: Python, Perl, R, visual basic, HTML, Javascript
Framework/Libraries: Spark, SparkSQL, SparkMLlib, Numpy, Pandas, scikit-learn, Matplotlib, Bokeh, D3, sickit-flow, Tensorflow, HIVE, MapReduce, HDFS, Flask
Databases: mysql, sqlite, mongodb, Hbase, Cassendra
Others: Git/Github, deep learning, CUDA

Projects Experience

Return Product Prediction – github.com/kuanliang/return-board   *March 2016*

- Develop algorithms for return product prediction and prescription analysis with scikit-learn
- Design and implement modeling and deployment pipeline with Spark, Flask, Sqlite
- Optimize data pipeline efficiency via SparkSQL, SparkMLlib and python comprehension
- Improve prediction precision and stability via ensemble learning algorithms

Traffic Gap Prediction – github.com/kuanliang/traffic_gap   *June 2016*

- Design machine learning algorithms for time series data with Pandas and scikit-learn

Multinomial rRNA Bayesian classifier – sourceforge.net/p/gdrrnaclassifie/wiki/Home   *December 2014*

- Improve accuracy of naïve Bayesian classifier for taxonomic assignment by incorporating multinomial models and Generalized Dirichlet priors.
- Benchmark classifier performance on microbial and fungal rRNA sequences with different lengths

Fungal LSU/ITS classifier - rdp.cme.msu.edu/classifier/classifier.jsp   *December 2013*

Visualization of 16S rRNA taxonomy assignment - mg.bio.titech.ac.jp/vitcomic/   *July 2011*

REVT - rRNA Experimental Validation Test/Tool   *November 2011*

Professional Experience

Foxconn Precision – Data Scientist   China | *August 2015~Now*

- Design and implement machine learning predictive models for return products
- Design and conduct Big Data, machine learning training courses for engineers

Georgia International – Software Engineer   Taiwan | *September 2010~August 2015*

- Build the audit process information system, Design and build up company website
- Audit customers according to ISO 9001, TS 16949 and customer requirements
- Create new CE marking service and signed 10 newly developed consulting deals

TokyoTech University – Visiting Scholar   Tokyo | *July 2010~September 2010*

- Develop visualization tools for 16S rRNA taxonomy assignment results comparison

Los Alamos National Laboratory – Graduate Research Assistant   USA | *October 2008~December 2010*

- Design machine learning algorithms for metagenomic read assignment
- Design classifier for fungal ITS/LSU rRNA sequence taxonomic assignment
- Analytics and build up data analysis pipeline for human oral microbiome projects

Education

Udacity - Machine Learning Engineer Nanodegree	*October 2016*
Coursera - Machine Learning Specialist / Processing mining – Data Science in action	*May 2015*
Edx - Big Data / Data Science and Engineering with Apache Spark XSeries	*August 2015*
MIT Professional Education - Tackling the Challenge of Big Data	*August 2015*
National Cheng Kung University - Information Management, M.S., Ph.D.	*December 2014*
National Cheng Kung University - Industrial and Information Management, B.S.	*June 2005*

Awards, Honors, Scholarship

- Acceptance for STAMPS workshop at Marine Biology Laboratory USA   *December 2014*
- Scholarship for Japan Summer Program at TokyoTech University   *July 2011*
- The winner of ISME (International Symposium of Microbial Ecology) travel grant   *July 2010*
- The winner of HMRC (Human Microbiome Research Conference) travel grant   *May 2010*
- Scholarship for Pittsburgh Science of Learning Center summer school