

Dryden Bouamalay

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EDUCATION

CALIFORNIA INSTITUTE OF TECHNOLOGY

B.S. COMPUTER SCIENCE
2012 - 2016 | Pasadena, CA

LINKS

LinkedIn:

<https://www.linkedin.com/in/drydenb>

Github:

<https://github.com/drydenb>

Personal:

<http://www.drydenbouamalay.com>

COURSEWORK

COMPUTER SCIENCE

Computer Architecture & Systems
Machine Learning & Data Mining
Databases
Functional Programming
Algorithms
Computer Graphics

MATHEMATICS

Linear Algebra
Discrete Mathematics
Probability & Statistics

SKILLS

PROGRAMMING

Proficient:

• Python • C++ • Scala

Familiar:

• Bash • C • PostgreSQL
• Java • Haskell

LIBRARIES, TOOLS, ETC.

Familiar:

• Git • Spark • Docker
• Google Cloud Platform • AWS (RDS)
• Pandas / NumPy / SciPy
• Tensorflow • scikit-learn

FOREIGN LANGUAGE

• Japanese - *Intermediate*

EXPERIENCE

NETWORKED INSIGHTS

DATA ENGINEER

October 2016 - Present (9 months) | Chicago, IL

- Designed relational database architectures and implemented ETL for BI applications using PostgreSQL, Google BigQuery, and Python.
- Processed raw text data using Scala to run Spark jobs in Google Cloud Dataproc.
- Migrated ETL and ML jobs to Docker containers and scheduled them in Rundeck to run on Google Cloud Compute Engine.
- Ingested data from providers using Python API requests and deposited results into PostgreSQL instances on AWS RDS.
- Implemented a graph clustering algorithm in Python to gain insight on sets of social media data.

CRABEL CAPITAL MANAGEMENT

SOFTWARE ENGINEERING INTERN

June 2016 - August 2016 (3 months) | Century City, CA

- Developed C++ software to interface with proprietary market data storage for backtesting high-frequency trading strategies.
- Tested and debugged order book implementations for the Eurex Exchange.
- Engineered solutions to convert FIX/FAST market data to proprietary storage with the QuickFAST C++ library. In addition, wrote scripts in Python to automate data conversion and processing.
- The majority of the software was developed and designed in C++ using templates and object-oriented design patterns in Fedora Linux.

MITSUBISHI ADVANCED TECHNOLOGY R&D

SOFTWARE ENGINEERING INTERN

June 2015 - August 2015 (3 months) | Amagasaki, Japan

- Investigated algorithms and methods to perform medical image registration.
- Implemented multi-resolution and multi-stage image registration algorithms using CMake and the ITK library (C++).
- Developed an application in Visual Studio C# (WPF) that allowed users to perform image registration algorithms on 2D and 3D images using the Elastix toolkit.

PROJECTS

GENERATING SONNETS WITH HIDDEN MARKOV MODELS

- *Python*: Implemented the EM algorithm to train the parameters of a Hidden Markov Model on 154 of Shakespeare's sonnets. Sample sonnets were generated using the trained model.

SMART GAME FORMAT PARSER

- *Scala*: Developed a parser for SGF files using FastParse, a Scala parser-combinator library.

TEXT CLASSIFICATION WITH SCIKIT-LEARN

- *Python*: Classified speeches with decision trees and random forests, using boosting and bagging methods where appropriate. Final models were selected via ensemble methods.