Dryden Bouamalay

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++
Familiar:
• Scala • 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 (11 months) | Chicago, IL

- Designed RDBMS architectures and implemented ETL for SaaS applications using Python, PostgreSQL, and Google BigQuery.
- Processed textual data using Google Cloud Dataflow (Apache Beam) and Google Cloud Dataproc (Spark).
- Ingested JSON data from providers with Python and deposited results into PostgreSQL instances on AWS RDS.
- Implemented a graph clustering algorithm to gain insight on social media data with Python.

CRABEL CAPITAL MANAGEMENT LLC

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. Automated data conversion and processing with Python.
- 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, a gradient descent problem that finds a correspondence between images.
- Implemented multi-resolution and multi-stage image registration algorithms using CMake and the ITK library with 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.