Darius Gatlin

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EDUCATION

American University   **Washington, DC**   **Expected Graduation:** *Dec 2015*

Fully Financed 100% of College Education

- B.S. in Computer Science   GPA: 3.72

    Data Science Concentration

- Minor in Finance

KEY SKILLS & KNOWLEDGE

- Data Science: Big Data Analytics, Artificial Intelligence, Machine Learning, Knowledge Discovery, Cloud Computing
- Programming Languages: Java, R (Statistical Programming)**,** Python, SQL/MySQL, MongoDB/NoSQL, C#, Java Script
- Quantitative Analytics: Design & Analysis of Algorithms, Data Mining, Time-Series Analysis, Classic Statistical Methods
- Machine Learning Libraries: Scikit-Learn, Weka, Mahout, Open NLP, Massive Online Analysis, PyBrain, NLTK, JSAT
- Web Development: D3.js Data Visualization(d3js.org), Twitter Bootstrap, Spring MVC, ASP.NET, Node.js, HTML 5, Angular.js
- Business: Investment Analysis, Portfolio Management, International Business, Marketing, Production & Operations Management

PROFESSIONAL EXPERIENCE

TransVoyant, Washington, DC   **September 2014 – March 2015**
Software Engineer Intern: Big Data Analytics Software Engineering

- Working as an R&D software engineer within the Product Management team, utilizing agile methods to design and develop cutting edge Data Visualization & Machine Learning software for 800+ TB high performance Enterprise-Grade applications.

Aptima: Human Centered Engineering, Washington, DC   **May 2014 – August 2014**
Data Scientist/Research Engineer Intern: Analytics, Modeling & Simulation

- Researched Data Science discoveries, implemented and integrated modeling algorithms in software for; multi-agent simulation, temporal & relational data mining, probabilistic pattern recognition, social network analytics, and Natural Language Processing.

Applied Technical Systems, Washington, DC   **September 2013 – January 2014**
Data Scientist Intern: Machine Learning Software Engineering

- Researched and developed algorithms for modeling and predicting key features, relationships, and patterns in large data sets. Engineer tested well documented machine learning software prototype solutions for Data Mining/Knowledge Discovery systems

Intel Corporation, Hillsboro, OR   **May 2013 - August 2013**
Software Engineer Intern: Intel Collaborators Program

- Part of a team of select undergraduate and graduate engineering students from varied technical backgrounds assembled to design and implement innovative solutions to advanced technical challenges faced by Intel Corporation

RESEARCH & ENGINEERING PROJECTS

Skythena- Human Body Analytics End-to-End Cross Platform App   **Spring 2015**
Computer Science Capstone Project: JavaScript / Python / MongoDB / Android & iOS Development

- Designed, implemented, tested and debugged the front-end source code for the Cross Platform Android/iOS Fitness & Nutrition Activity Tracking Mobile application in Java Script, HTML5, and CSS3, via the Angular.js & Ionic Cross Platform Mobile development framework, as well as D3.js data visualization technology, and embedded REST functionally within the Front-end.

- Designed the data model and implemented cloud data persistence layer resulting from the combination of a MongoDB database and a Neo4j Graph database, embedded within the Python backend with Object Mapping via, MongoEngine & NeoModel.

- Designed and implemented a C.R.U.D. / Automated Analytics Python backend by embedding the Artificial Intelligence functionality found in SciKit-Learn & NLTK, as well as the statistical analysis functionality of Statsmodels & Pandas, within a Flask application build on top of the NoSQL data persistence layer, exposed the backend to cross-origin requests via REST.

- Optimized the scalability of the system's backend components, by structuring them to utilize parallel processing on multicore CPUs. As well as enabling Linear Scaling of the data persistence layer in times of increased data demands on the system.

Intel Corporation   **Summer 2013**

Intel Collaborators Program- Big Data Analytics Engineering: C# / MongoDB / Android Development

- Developed a data set reduction algorithm to increase the scalability of the project's multi-million row data access/processing cloud service component, resulting in a significant increase in the performance and overall efficiency of the technology

- Designed and implemented a NoSQL MongoDB database, translated the project's data model from a relational to an object-oriented model. Optimized the model for efficient performance in descriptive as well as predictive analytics

- Designed and conduct scalability "statistical stress tests", as well as JMeter multithreaded server performance testing software, developed various functionality testing algorithms, and performed multiple regression analysis for a greater understand of the results

- Conducted market research concerning present as well as future market conditions and potential revenue. Developed a transaction-based pricing model, intended to maximize profitability and generate continuous revenue streams

Data Mining & Machine Intelligence for Cancer Survival Prediction in R   **Spring 2013**

Statistics 524- Data Analysis: Predictive Analytics Research Paper

- Utilized classical statistical methods of inspecting, cleaning, transforming, and modeling data with the goal of discovering useful information, suggested best course for performing the analysis, and supported decision-making

- Designed a quantitative data analysis study based on the simultaneous application of statistics and computer programming to predict cancer survival on a data set with 80,000 observation and 26 predictor variables

- Wrote Data Mining R scripts to perform Logistic Regression, Principal Component Analysis, Classification & Regression Tree Analysis in order to identify correlations and extract knowledge from the unstructured data set

- Utilized the Random Forest Machine Learning Algorithm to produce a "Cancer Survival" predictive model with a historical accuracy of 90%, which was 5% higher than any previously recorded predictive model for the data set

Financial Time Series Data-Warehouse Architecture   **Spring 2013**

Computer Science 570- Database Management Systems: SQL / Python Development

- Designed and implemented a Time-Series Data-Warehouse by linking separate homogenous SQL databases

- Consisted of SQL tables, queries, etc., forming databases of Stock Price Data as well as Options Contract Data

Algorithmic Trading, Quantitative Portfolio Management, & Data Science   **Spring 2013**

Computer Science 493- Computer Science Capstone: Python / SQL Development

- Designed and implemented an algorithmic trading system for Options Contracts by coding various Python Modules

- Consisted of classes for time-series/financial analysis, receiving/storing financial data, and automated order execution

Beat the Market: Android Mobile Game   **Spring 2012**

Computer Science 281- Computer Science II: Android / Java Development

- Designed and implemented an Android OS Application by coding various Java classes and graphical user interfaces

- Consisted of classes to request, parse, and store data from the yahoo finance web server and calculate and display portfolio returns, the goal being to create a portfolio with a greater return than that of the S&P 500 U.S. Equity Index

ACTIVITES & MEMBERSHIPS

- Market Technicians Association – Chartered Financial Market Technician: Candidate Level I / Student Member

- International Association of Quantitative Finance: Student Member

- Association for Computing Machinery – Group on Knowledge Discovery in Data & Data Mining: Student Member

- Association for the Advancement of Artificial Intelligence – Student Member

- American Statistical Association – Student Member