jamesandreou

contact

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github.com/jamesandreou
www.jandreou.com

languages

Java, JavaScript, C++,
Go, Python, HTML5

skills

Algorithms, Operating Systems, User Interfaces, Artificial Intelligence, Big Data Analysis, Performance Optimization

technology

Node.js, React.JS, Spark, Cassandra, Jupyter, Hadoop, Unix, Git, Web Browsers, Linux

experience

Uber - Software Engineer Intern, New York, NY, Summer 2017

- Collected dispatching data and experimented on improved pre-dispatch ETA models resulting in a gradient boosted trees model reducing **ETA error by 5-20%**
- Implemented the gradient boosted tree model in the dispatching system resulting in a reduced **15% ETA error, 4% driving and waiting time, 2% trip time**
- Altered the dispatch system waypoint model to support parking time calculations in future time models
- Added the ability for UberEats operations to give certain vehicle types (bikes, walkers, etc) a boosted dispatch ranking based on a certain geo area or pickup restaurant

Google - Software Engineer Intern, Mountain View, CA, Fall 2016

- Created a natural language processing back end converting human text queries to complex Adwords analytical reports and graphs
- Extended Google's NLP engine to detect a user intent to alter a report using **previous context** allowing users to build complex reports with multiple text queries
- Participated in a week long **design research sprint** to prototype a front end UI that could elegantly guide users to make complicated queries with natural language
- Created a front end component to interface with the back end engine allowing users to input natural language queries that are **validated and auto completed in real time**

Mozilla - Software Engineer Intern, Toronto, ON, Summer 2016

- Rebuilt browser's DOM node children data structure from memory shifting array to doubly linked list with an iteration friendly index caching strategy
- Micro optimized the new DOM node children API resulting in insertion/removal operations performing **200-600% faster** on large DOM trees
- Integrated private browsing into the **web origin security model** for an improved security API across private and non private web context

education

University of Waterloo, 2013 - 2017
Bachelor of Computer Science (**BCS**), Business Option

projects

Graph Toolbox (www.graphtoolbox.com), Summer 2015

- Created a web app to visually create, manipulate and run algorithms on graphs
- Ability to test if a graph is planar and compute a graphical planar embedding, or find a K5/K3,3 minor proving the graph is not planar
- Some features include: directed / weighted edges, preset graphs, dynamic UI

Beugo the Blob (play.google.com), Summer 2015

- Developed an android arcade game implementing soft body physics algorithms to emulate blob bodies
- Additional features include different difficulties, interactive tutorial, level system and much more

extracurriculars

Actuarial Science Club Executive - Organized and Directed Events
Computer Science Club - University of Waterloo
Rugby - Secondary School Undefeated Season
Computer Science TA - Markville Secondary School