Ben Thompson

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Skills

Python R Hive SQL | NumPy Pandas Scikit-Learn SQLAlchemy Flask | HTML jQuery

Industry Experience

Data Scientist, Rider Experience at Uber

May 2016 — Present

- Partner with product managers, data scientists, and engineers across the company to inform product direction with data insights.
- Built and maintain automated A/B test analysis platform, enabling quick insights on the multitude of experimental features being evaluated with Uber's rider app.
- Champion data democratization within Rider Experience by distilling complex stream of rider app events into more accessible tables; empowering engineers and product managers to derive insights on user behavior independent of data science bandwidth.
- Aggregate rider app events and backend logs to extract leading indicators of problematic user actions, such as trip cancellation or request abort. Engineering utilizes predictions to develop features to preempt bad actions in real time.
- Promoted once and consistently given more responsibility.

Data Scientist, Marketing at KIXEYE

April 2015 — May 2016

- Collaborated with analysts and stakeholders across departments to develop data-driven engagement marketing strategies.
- Optimized game push notifications by quantifying message impact on player behavior and revenue.
- Built and maintained automated re-marketing system, allowing for A/B testing and multiple communication channels (push notifications, email, targeted ads, etc.) to reengage lapsed players.
- Developed company's first dynamic offer system by analyzing player behavior to inform strategy on timing and content of optimal in-game sales.

Data Science Fellow at Insight Data Science

Jan. 2015 — March 2015

- Created RespawnInto (respawninto.bathompso.com), a web app that recommends future video game purchases based on users' current favorites.
- Built recommendation engine using jaccard similarity from user comment activity, and Scikit-Learn TF-IDF analysis of game review text.
- Deployed front-end interface with Flask, Bootstrap, jQuery, d3, and AWS.

Research Experience

Graduate Researcher at Texas Christian University

Sept. 2010 — Jan. 2015

- Developed new method of binary star system detection that provides results for a fraction of the resources and time required by current techniques.
- Wrote Python analysis program using NumPy that determines component masses of binary star systems, impossible for nearly all current techniques, to within 15%.
- Parallelized analysis code with OpenCL to handle nearest-neighbor algorithm for thousands of stars and tens of thousands of models, in up to 12 dimensions. Code available at github.com/bathompso/binocs.

Developer at Sloan Digital Sky Survey

Sept. 2010 — Jan. 2015

- Wrote and maintained autoscheduler program, which optimally chose nightly targets for observation during the 3rd and 4th iterations of the Sloan Digital Sky Survey.
- Connected Python autoscheduler to Postgres database using SQLAlchemy to read information on thousands of possible targets, utilizing data on tens of thousands of past observations.
- Developed web API using Flask to easily link autoscheduler to other SDSS webapps and interfaces.

Education

Ph.D. in Physics, Texas Christian University, Fort Worth, Texas 2015
B.A. in Astrophysics and Mathematics, Ohio Wesleyan University, Delaware, Ohio 2010