TUSHAR CHANDRA

DATA SCIENTIST

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EMPLOYMENT

Data Scientist · Nielsen — July 2018 to Current

- Researched and prototyped novel Bayesian inference methodology for measuring audiences across platforms, which more accurately portrays uncertainty, better uses sparse data, and reduces the prevalence of "zero" audiences
- Improved Nielsen's flagship TV ratings by creating model for TV viewing in Pyspark which trains 10x faster, admits 4x fewer false positives, and is more defensible to clients compared to previous production model (US patent pending)
- Designed and built alpha version of company-internal Python framework for streamlining and unifying data science workflows; automated documentation build using Sphinx and AWS
- Presented Spark tech talk to 350 data scientists, software engineers, and business leaders across Nielsen
- Created several Python & Spark libraries to unify team's workflow, improve code readability, and enable consistent comparison of different candidate models

Software Engineering Intern · Qualtrics — June 2017 to Aug. 2017

- Added new features (pagination, custom data types, UI enhancements) to "action planning" module on Employee Experience platform, better allowing managers to effect change in their team
- Redesigned handling of page filters for action planning dashboards by refactoring shared and product-specific code
- Increased test coverage for product by 10% and wrote test files from scratch for untested services

Teaching Assistant · Northwestern University — Mar. 2016 to June 2018

- Mentored students in intro programming, intermediate Python, discrete mathematics, and data structures courses
- Assisted with curriculum and exam design; led small-group tutorial sections; taught students individually

SKILLS

PYTHON: fluent in core language features, scientific computing libraries (NumPy , pandas, scikit-learn, PyTorch), visualization (Matplotlib, Altair), Bayesian inference (PyMC3, Pyro)
TECHNOLOGIES: Git, Unix, unit testing and TDD, machine learning, statistical modeling and Bayesian inference, data viz (Python, d3.js), AWS, Docker (basic)
OTHER LANGUAGES: SQL (advanced), Spark (advanced), JavaScript (intermediate), R (basic)

EDUCATION

Northwestern University

M.S. Computer Science - GPA 4.0 - 2018

B.S. Computer Science & Integrated Science - GPA 3.96 - 2018

Student in the Integrated Science Program, a selective, research-oriented program in science and mathematics; member of Tau Beta Pi Engineering Honor Society; affiliations include Phi Mu Alpha and marching band.

PROJECTS

Tech for Campaigns - volunteer data scientist & engineer

- Volunteer data scientist on a team building a model to predict state & local elections
- Improve the robustness of the data ingestion pipeline with more unit tests and better CI, built tools to download & process electoral data, and analyzed downstream "diffs" of model predictions

Red Tweet, Blue Tweet

- Investigated political polarization over time on Twitter by replicating methods of Barberá et al. using Python and R
- Collected 53 million Tweets over 3 weeks with Twitter Streaming API, storing in MongoDB database
- Used correspondence analysis to estimate political ideology of 3 million users and analyze online polarization

Sleep Analysis

- Leveraged Fitbit API to obtain two years of minute-by-minute sleep data
- Analyzed and visualized data in Python to draw conclusions and gain insights about personal sleep patterns