Tushar Chandra

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EXPERIENCE

Senior Data Scientist

July 2020 - Present

Nielsen

Chicago, IL

- Researched and shipped novel Bayesian inference model for measuring cross-platform audiences; the model more accurately portrays uncertainty, handles incomplete data, and reduces prevalence of "zero" audiences (US patent pending)
- Designed and developed evaluation framework for benchmarking a new TV viewing model against 100s of GBs of historical data
- Presented tech talks on Spark, <u>Bayesian modeling</u>, MLflow, and Python to mixed audiences of 200+ data scientists, software engineers, and business leaders

Data Scientist

July 2018 – July 2020

Nielsen

Chicago, IL

- Improved 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 than previous production model (US patent pending)
- Designed and built alpha version of company-internal Python framework for unifying data science workflows; automated documentation build using Sphinx and AWS

Software Engineering Intern

Summer 2017

Qualtrics

Seattle, WA

- Added pagination, custom data types, & UI enhancements to "action planning" module on Employee Experience platform (AngularJS, Java)
- 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

March 2016 - June 2018

Northwestern University

Evanston, IL

- 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

EDUCATION

Northwestern University

Evanston, IL

M.S. in Computer Science (GPA 4.0)

June 2018

Northwestern University

Evanston, IL

B.S. in Computer Science, Integrated Science Program (GPA 3.9)

June 2018

Projects

$\mathbf{Mystery\ Dungeon\ Rescues}\ |\ \mathit{Python},\ \mathit{JavaScript},\ \mathit{Tailwind\ CSS}$

tusharc.dev/rescue

• Built a responsive, mobile-friendly web tool for saving players in the video game Pokemon Mystery Dungeon: Rescue Team DX, using Pyodide to run custom Python code in-browser alongside JavaScript

Tech for Campaigns | Python, PostgreSQL, scikit-learn

techforcampaigns.org

- Improved data ingestion pipeline for election prediction model, resulting in 200+ unit tests passing, fewer build failures, and 10% faster CI runs
- Built tools to download & process messy, disparate electoral data from 4 state election boards

Website and Blog | Hugo, Tailwind CSS

tusharc.dev

• Personal website with 80+ summaries of CS research papers, 200+ posts, and 100+ weekly visitors

Technical Skills

Languages: Python, SQL, PySpark, JavaScript, HTML/CSS

Technologies: Git, Unix, Flask, unit testing & TDD, machine learning, Bayesian modeling

Libraries: numpy, pandas, matplotlib, scikit-learn, PyTorch, xarray, PyMC3