

# Tushar Chandra

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## EXPERIENCE

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### Senior Data Scientist

July 2020 – Present

*Nielsen*

*Chicago, IL*

- Researched and shipped Bayesian inference model for measuring audiences for 100s of ad campaigns on 3 platforms, using PySpark, NumPyro, and Airflow (US patent pending)
- Designed and developed evaluation framework for benchmarking cutting-edge Bayesian PyTorch TV viewing model against 100s of GBs of historical data
- Productionalized ad-hoc ETL runs and ML model training to be more reproducible, increasing iteration speed
- Created matplotlib visualizations to evaluate and build trust in machine learning models

### Data Scientist

July 2018 – July 2020

*Nielsen*

*Chicago, IL*

- Rebuilt flagship TV ratings model with machine learning in PySpark to train 10x faster and admit 4x fewer false positives (US patent pending)
- Developed alpha version of internal Python framework for unifying workflows for 1000+ data scientists
- Automated documentation build of internal framework using Sphinx and AWS
- Presented tech talks on Spark and [Bayesian modeling](#) to audiences of 200+ data scientists, software engineers, and business leaders

### 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

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### 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

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### Mystery Dungeon Rescues | *Python, JavaScript, Tailwind CSS*

[tusharc.dev/rescue](https://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](https://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](https://tusharc.dev)

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

## TECHNICAL SKILLS

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

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

**Libraries:** numpy, pandas, matplotlib, scikit-learn, PyTorch, Pyro