Nicholas Haynes

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Data scientist and software engineer with a deep mathematical background. Experience bringing machine learning from research to production.

Experience

Stats Perform, Durham, NC **March 2019 – Present**
Director of Data Science (January 2020 - Present)
Lead Data Scientist (March 2019 - January 2020)

- Led a team of data scientists and analysts that leveraged Stats Perform's best-in-class sports data to make predictions for NBA, NFL, MLB, and international soccer outcomes.
- Trained and deployed models for predicting team and player-level outcomes using Bayesian, neural network, and traditional machine learning techniques that demonstrably outperformed sports book odds.
- Developed a real-time system for generating and ranking the relevance of storylines within sports matches to boost engagement for sports media consumers.

Automated Insights, Durham, NC **May 2016 – March 2019**
Lead Data Scientist (May 2017 – March 2019)
Data Scientist (May 2016 – May 2017)

- Built and managed the data science team, which focused on machine learning and algorithm development for the Wordsmith natural language generation platform.
- Trained and deployed neural network word representation models to generate in-line word suggestions for Wordsmith users.
- Rewrote the core natural language generation engine, leading to a 90% decrease in narrative generation time with more transparent error reporting and a substantial reduction in technical debt.

Duke University, Department of Physics, Durham, NC **May 2013 – May 2016**
PhD Candidate (ABD)

- Built and evaluated the performance and fundamental dynamics of high-speed neural networks in hardware.
- Designed and implemented a robust data pipeline for automating lab experiments and conducting high-throughput analysis on 100s GB of experimental data.

Technical skills

Languages: Production experience in Python, Javascript.
Packages/Frameworks: PyData ecosystem (NumPy, scikit-learn, pandas), TensorFlow, Flask.
Software development: git, REST, HTTP, Bash and Unix, AWS, test-driven development, relational and NoSQL (document store, graph, and columnar) databases.
Data analysis and machine learning: Natural language processing, classification, regression, clustering, deep learning, Bayesian machine learning.

Education

MA, Physics **December 2016**
Duke University, Durham, NC

MS, Applied Mathematics **May 2013**
University of Dayton, Dayton, OH

BS, *magna cum laude* **August 2011**
University of Dayton, Dayton, OH
Majors: Physics, Philosophy