Nicholas J Morris

Scientific Programmer nicholasjmorris1993@gmail.com www.github.com/nicholasjmorris1993

Professional Summary

Experienced Scientific Programmer with a demonstrated history of working in Computer Software for over 7 years. Skilled in Continuous Improvement, Machine Learning, and Optimization. Strong engineering professional with a Bachelor of Science and Master of Engineering in Industrial Engineering from Rochester Institute of Technology.

To work for a job where my analytical ability can facilitate contemporary solutions. In this job, I will build optimization, machine learning, or statistical models with the combined knowledge of data, people, and literature to describe key patterns and anticipate desired information and goals.

Key Strengths

- Machine Learning in Python and R.
- Optimization in Python and AMPL.
- Back-end Programming in Python. Familiar with SQL and Bash.
- Discrete Event Simulation in Simio.
- Monte Carlo Simulation with Design of Experiments in Python, R, and Excel.
- Statistical Analysis in Python and R: *Summarizations, Hypothesis Testing, Distribution Identification, Confidence Intervals, Process/Quality Control, Visualizations, Data Cleansing, Covariation/Distances, Transformations, Non-Black-Box Modeling.*

Education

Undergraduate/Graduate Student

Rochester Institute of Technology, Rochester NY, Aug-2011 – Nov-2018 (7 yr 4 mo)

- Bachelor of Science in Industrial Engineering, Aug-2011 to May-2017, 3.46/4.00
- Master of Engineering in Industrial & Systems Engineering, Aug-2015 to May-2017, 4.00/4.00
- Doctor of Philosophy in Engineering, Aug-2017 to Nov-2018, 3.06/4.00

Work Experience

Data Analytics Engineer

FacilityConneX, Nashua NH, Oct 2020 – Jul 2022 (1 yr 10 mo)

- Back-end developer for continuous performance and reliability monitoring.
- Developed real-time machine learning in Python for a data streaming platform.
- Developed real-time analytics in Python on a data streaming platform.
- Code conversions from C# to Python.
- Developed time series dashboards.

Data Scientist

Aspen Technology, Bedford MA, Mar 2019 – Jun 2020 (1 yr 4 mo)

- Researched and constructed hybrid machine learning with first principles using Python and R.
- Developed the Python back-end engine for Hybrid Model Builder.
- Back-end developer of Python libraries for Hybrid AI Builder.
- I went to the 2020 East Open Data Science Conference to engage with the community.

Researcher (Student)

Rochester Institute of Technology, Rochester NY, Sep 2016 – Nov 2018 (2 yr 3 mo)

- Presented vaccine research on global distribution optimization for the Bill & Melinda Gates Foundation at the 2017 INFORMS conference.
- Using statistics and optimization in R and AMPL, I modeled budget uncertainty in the global vaccine market.
- Using machine learning in R, I developed a healthcare risk index for each country over time.
- Reviewed vaccine literature using natural language processing in R.

Data Scientist (Intern)

Geisinger Health, Danville PA, Jun 2017 – Aug 2017 (3 mo)

- Using machine learning in R, I modeled the likelihood of a patient not donating to the MyCode program that genetically predicts illness and disease.
- Using machine learning in R, I modeled the distinguishing characteristics of bladder cancer patients.

Data Analyst (Intern)

Geisinger Health, Danville PA, Jun 2016 – Aug 2016 (3 mo)

- Using statistics in R and Teradata, I made recommendations to executives of two neighboring hospitals on how to share their demands based on an analysis of personal health records and doctor schedules.
- Using statistics in Excel and Teradata, I made recommendations to the hospital's operations staff on responding to changing occupancy levels based on a time series analysis of personal health records.

Simulation Modeler (Student)

Rochester Institute of Technology, Rochester NY, Nov 2015 – Mar 2016 (5 mo)

- Using Simio, I developed a hierarchical discrete event simulation model of a manufacturing facility for the United States Department of Defense.

Product Management Analyst (Intern)

Mercury Systems, Chelmsford MA, Jun 2015 – Aug 2015 (3 mo)

- I developed a system of Excel spreadsheets to automate the pricing of new products.
- Using machine learning in R, I created a model for the price range of new products.

Continuous Improvement Engineer (Intern)

JMA Wireless, Liverpool NY, Jun 2014 – Jan 2015 (8 mo)

- I provided a time series analysis of safety, quality, delivery, and cost for multiple manufacturing cells.
- I ran time studies on multiple manufacturing cells. Designed and machined a system for line balancing the manufacturing cells. And I developed an Excel spreadsheet for redesigning the line balancing system.
- I measured the floor layouts of multiple manufacturing cells to redesign inventory and machine locations using AutoCAD and tape.
- I carried out a repeatability and reproducibility analysis on multiple workstations using Excel and Minitab.