Michael F Vertuli

Software Engineer

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About

Architecting big data pipelines, deploying machine learning models, and extracting insights with Scala, Spark, AWS, Python, and SQL.

Experience

Factual
Software Engineer

March 2019 - April 2020
(1 Year, 1 Month)

↗ https://www.factual.com

- Architected, implemented, deployed, and maintained large scale Spark pipelines in Scala responsible for generating our core data products.
- Built dashboards with Django in Python for exploring pipeline outputs and monitoring data quality.
- Designed and deployed machine learning models to predict audience demographics and augment customer segments.
- Investigated data sources and our data products, regularly releasing Jupyter notebook reports to help management.
- Volunteered with recruitment efforts and engineering mentoring program.

Self Employed
Private Tutor

January 2017 - March 2019
(2 Years, 2 Months)

↗ https://tutor.vertuli.com

- Worked with dozens of college and high school students to improve confidence and skills with math and physics between Washington, DC and Los Angeles, CA.

Landon School
Mathematics Teacher

August 2016 - January 2017
(5 Months)

↗ https://www.landon.net

- Redeveloped math syllabus to emphasize statistical thinking, real-world modeling, and practical applications, and coached the 9th grade boys' soccer team.

Newton China
Founder and CEO

🔗 https://newton.vertuli.com

- Founded a Shanghai-based education consultancy and lead a team of counselors, marketers, and account managers serving Shanghai's top students aiming to study abroad in the U.S.
- Quickly pivoted from providing test preparation to fill a niche demand for long-term, holistic, and honest academic planning and guidance beyond test scores.
- Developed data scraping tools to collect and process public application profiles and admissions data into Salesforce, helping inform our staff and track student metrics.

Shanghai Normal University
Physics Teacher

July 2009 - July 2011
(2 Years)

🔗 http://en.ulink.cn/Shanghai/

- Standardized department assessments and developed system to track and report student metrics.
- Assisted IT with implementing its first school management system (SIMS) and Moodle integration.

Education

Colorado State University

2008 - 2008

Graduate Studies
Astrophysics

Analyzed fluorescence detector calibration data from the Pierre Auger Cosmic Ray Observatory using Python, MATLAB, and Mathematica to find anomalies.

Pennsylvania State University

2006 - 2008

Bachelor
Physics, Mathematics

Designed, collected, and analyzed data using Python and ROOT from an experiment measuring angular dependence of fluorescence scattering from a radioactive source.

Wilkes University

2004 - 2006

Undergraduate Studies
Electrical Engineering

Tutored physics, assisted with undergraduate mechanics course, and imaged metallic whiskers with scanning electron microscopes.

Volunteer

Heart to Heart Shanghai

Sponsor and Fundraiser

↗ https://www.h2hsh.com

Raised funds for two child heart surgeries at annual student Battle of the Bands

Skills

Languages

Scala   Python   SQL

Toolbelt

Spark   AWS   Hive   Airflow   spark.ml   scikit-learn   Django   DynamoDB