

Michael F Vertuli

Software Engineer

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About

Architecting big data pipelines, deploying machine learning models, and extracting insights with Scala, Spark, 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 business-critical data pipelines in Hadoop with Hive, SQL, and Airflow.
- Collaborated cross-functionally with product managers and marketing to deliver data dashboards and visualizations with Django in Python.
- Designed and deployed predictive machine learning pipelines using Spark in Scala to model audience demographics and customer segmentation.
- Conducted regular data investigations, regularly releasing Jupyter notebooks and giving company presentations.
- Promoted twice within my first year and 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

July 2011 - August 2016

(5 Years, 2 Months)

📄 <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

Sponsor and Fundraiser

 <https://www.h2hsh.com>

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

Skills

Python

Master

Airflow

Django

scikit-learn

Scala

Advanced

Spark

Functional Programming

spark.ml

SQL

Advanced

Hive

Postgres

AWS

Intermediate

CloudFormation

API Gateway

Fargate

DynamoDB

Other

Beginner

JavaScript

GraphQL

Kubernetes

Languages

English

Chinese

Cebuano

Native

Intermediate

Basic