

# Michael F Vertuli

Software Engineer



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## About

Architecting pipelines, plumbing big data, building up models, and extracting insights while keeping it clean with Spark, Hadoop, and AWS using Scala and Python.

## Experience

### Factual

Software Engineer

March 2019 - Present

(1 Year, 2 Months)

🌐 <https://www.factual.com>

- Quickly learned new languages and software to architect, implement, and own critical tools and pipelines, earning two promotions within my first year.
- Collaborated cross-functionally with product managers, marketing, and others to deliver internal and customer-facing applications and large-scale data products.
- Built machine learning pipelines to model and segment audiences while embracing test-driven development, monitoring, and alerting in both local and cloud environments.
- Helped others understand our work at the intersection of data science and engineering through regularly published data investigations, company-wide presentations, and mentoring.

### 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.

 <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.

## Heart to Heart Shanghai

February 2012 - March 2013

### 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*