Joshua Cook

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Experience

2018 - Present

Principal Lecturer, Data Science Specialization
for UCLA Extension (Los Angeles, Ca)

- Design and teach 130 hour curriculum in the fundamentals of Python and R, Machine Learning, Linear Algebra, Statistics & Probability, Hadoop, and Data Science.

2016 - Present

Machine Learning Consultant for Udacity (Remote)

- Develop neural network curriculum around image sequence recognition using synthetic datasets and Google SVHN dataset.
- Develop and maintain student Docker image for Self-Driving Car Nanodegree.
- Evaluate student work on Reinforcement Learning, Unsupervised Learning, Supervised Learning, Neural Network, and Convex Optimization projects for Nanodegree programs (Data Analyst, Machine Learning, Artificial Intelligence, Natural Language Processing).

2016 - 2018

Instructor, Data Science Immersive for General Assembly (Santa Monica, Ca)

- Design and teach 450 hour curriculum in the fundamentals of Python, Machine Learning, Linear Algebra, Statistics & Probability, and Data Science.
- Manage student project development in fields such as Semantic Search, Feature Extraction Pipelines, Computer Vision, Convolutional Neural Networks, and Fourier Analysis.
- Guide students in the design and maintanence of scalable data infrastructure using AWS, Docker, and open-source technologies such as MongoDB, PostgreSQL, and Apache Spark.

2016 - 2017

Machine Learning Engineer for Inrix (Santa Monica, Ca)

- Maintained production scale PostgreSQL database.
- Wrote predictive model for off-street parking availability using pure numpy implementation of cubic splines and Gaussian inference that is still in use. API consumed by Google Waze and BMW onboard system.
- Wrote predictive model for on-street parking availability using scikit-learn implementation of Random Forest Regressor that is still in use. API consumed by Google Waze and BMW onboard system.

2015 - 2016

Sofware Quality Assurance Engineer for Invoca (Santa Barbara, Ca)

- In addition to core duties for QA role, wrote command line phone utility still in use by QA team, wrote wrapper to load testing tool still in use by QA team, and researched FFT analysis of phone calls for use in fraud detection.

2014 - 2015

Computational Research Fellow in the Lab of Dr. Jussi Eloranta

Cal State Northridge, Department of Chemistry and Biochemistry (Northridge, Ca)

- Developed iterative methods for diagonalization of extremely large matrices using C and Python.
- Developed image recognition algorithms for identifying quantum phenomena.
- Maintained student Linux workstations.
- Funding provided by grant through National Science Foundation.

2012 - 2014

Full Stack Web Developer for Phylia de M. (Los Angeles, Ca)

2010 - 2012

Lecturer in the Graduate School of Education & Information Studies

UCLA (Los Angeles, Ca)

- Taught 15 units per quarter in Math Methods, Math Methods for English Language Learners, and Teaching in High-Need Communities.
- Supervised team of bilingual student teachers in their mandatory fieldwork.
- Developed online platform for student portfolio submission for completion of Preliminary Teaching Credential and Tier I Administrative Credential.

2005 - 2010 **High School Mathematics Teacher** (Los Angeles, Ca)

- Served as Mathematics Department Chair, 2007 - 2010.
- Served as Summer School Principal, 2008 and 2009.
- Developed Mathematics program with an emphasis on increasing outcomes for English Language Learners.
- Taught Algebra, Geometry, and Calculus in Title I Schools in South Los Angeles.

1998 - 1999 **Literacy Tutor** for Americorp (Oakland, Ca)

Publications & Presentations

2018 *Sampling for Big Data*, UCLAx Data Science Practicum.

2017 *Docker for Data Science: Driving Scalable and Extensible Data Science with Jupyter and Docker*, Apress.

2017 *The Containerized Jupyter Platform*, Jupytercon.

2016 *High-Performance Data Science with Docker, Jupyter, and Digital Ocean*, ODSC-West.

2016 *Binary Classification via Iterative Learning*.

2015 *The Zernike Polynomials*, Senior Thesis.

2014 *Applications of Imaginary Time Propagation Method in Material Research*, NSF PREM Grant Poster Presentation.

2010 *Toward A Critical Metric for High-Need Schools.*

Education

Master of Science in Computer Science at Georgia Institute of Technology
(*degree currently in progress*)
Emphasis: Interactive Intelligence

Master of Education at UCLA (Los Angeles, Ca)
Emphasis: Education Leadership
Earned Tier I Administrative Credential.

Bachelor of Science in Mathematics at Cal State Northridge (Northridge, Ca).
Emphasis: Computational Mathematics
Recipient NSF Partnership for Research and Education in Materials Grant.

Bachelor of Arts in English at UC Berkeley (Berkeley, Ca).