
Oliver James Thistlethwaite

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SUMMARY

I am a recent PhD graduate in mathematics from the University of California, Riverside and am currently a data scientist at Regulatory Data Corp.

EXPERIENCE

Regulatory Data Corp - *Data Scientist*

JANUARY 2017 - PRESENT

I am currently working for RDC as a data scientist.

University of Minnesota, Twin Cities - *IMA Data Science Fellow*

JANUARY 2017 - MARCH 2017

Was one of seven people admitted to a highly selective program at the Institute for Mathematics and its Applications designed to prepare recent postdoctoral mathematicians for careers in data science. Completed a project from Corning Inc which involved model building in R and Python with the goal of predicting glass liquidus temperature. Also contributed towards a project from a consulting firm whose purpose was to study government data on marijuana usage.

University of Tennessee, Knoxville - *Mathematics Lecturer*

AUGUST 2016 – DECEMBER 2017

Served as an instructor for Calculus 1 and Calculus 3. Also had experience leading recitation sections for Calculus 2 and Calculus 3.

Chaffey College, Rancho Cucamonga - *Adjunct Mathematics Professor*

JANUARY 2016 - JULY 2016

Served as an instructor for Preparation for Algebra, Pre-Algebra, and Elementary Algebra.

San Bernardino Valley College - *Adjunct Mathematics Professor*

JANUARY 2015 - JUNE 2016

Served as an instructor for Arithmetic, Elementary Algebra, and Intermediate Algebra.

University of California, Riverside - *Teaching Assistant*

SEPTEMBER 2008 - DECEMBER 2014

Served as an instructor for Intro to College Math for Science and the preparation course for the topology PhD qualifying exam. Also had experience as a teaching assistant for:

- Intro to College Math
- First Year Calculus I-III
- Liberal Arts Math
- Intro to Ordinary Differential Equations
- Intro to College Math for Science I-II
- Calculus of Several Variables I-II
- Calculus for Business
- Undergraduate Topology

University of Tennessee, Knoxville - *Graduate Research Assistant*

MAY 2007 - AUGUST 2007

Developed C++ and Mathematica code to create and analyze large data sets, which may be useful in solving the P / NP problem in computer science. Also wrote C++ code to perform matrix computations on very large sparse matrices.

EDUCATION

University of California, Riverside - *Doctor of Philosophy in Mathematics*

DECEMBER 2014

- Advisor: Stefano Vidussi
- Area of Study: Four-dimensional Geometry

University of Tennessee, Knoxville - *Master of Science in Mathematics*

MAY 2007

- Advisor: James Conant
- Area of Study: Algebraic Topology, Theoretical Computer Science

University of Tennessee, Knoxville - *Bachelor of Science in Mathematics*

MAY 2005

- Minor: Computer Science

SKILLS

C++ , Python, R, Spark, Scala, Tensorflow, LATEX, HTML5, CSS, JavaScript, Bootstrap, Ruby on Rails, SQL, Java, C# .NET, C, Quantum Computing, and Linux.

SERVICE

Science Fair Judge

2016

Had experience as an elementary school science fair judge.

Advisor for the UCR Math Undergraduate Research Project on Computer Vision

2014

Mentored a group of undergraduates for a research project on computer vision using the OpenCV library in Python.

American Mathematics Competition Volunteer Coach

2014

Mentored middle school students by helping them prepare for a mathematics competition.

AWARDS AND FUNDING

OpenBracket Programming Competition

2016-2017

Was a top finalist out of thousands of participants in both 2016 and 2017. Participated in the championship round in Wilmington, Delaware both years. The contests consisted of algorithms and application design. In the 2017 championship, which consisted of a single elimination tournament, made it to the semi-final round and placed in the top 25.

HackerRank Programming Competitions (99th percentile rating)

2016-2017

- 235th out of 5299 participants in World CodeSprint
- 92nd out of 3218 participants in BlackRock CodeSprint
- 117th out of 2985 participants in Moody's Analytics Hackathon
- 112th out of 1931 participants in Stryker CodeSprint

Dean's Distinguished Fellowship

2008-2010

Award given to outstanding first and second year graduate students.

Yueh-er, Hong-tsu and Clarence Cheng Kuo Fellowship Endowment

2007

Award given to the top two master's students in mathematics.

PUBLICATIONS

- O. Thistlethwaite. "Seiberg-Witten invariants, Alexander polynomials, and fibred classes." PhD Dissertation. University of California, Riverside.
- J. Conant and O. Thistlethwaite. "Boolean formulae, hypergraphs and combinatorial topology." *Topology and its Applications*. 157 (2010), no. 16, 2449-2461.
- O. Thistlethwaite. "A study of the homology of spaces generated by subsets and the connection to the k-sat problem in computer science." Master's Thesis. University of Tennessee, Knoxville.

SELECTED TALKS

- *Bayesian hierarchical modeling*. UTK Mathematical Data Science. December 5, 2017.
- *Corning data challenge*. IMA, University of Minnesota, Twin Cities. March 8, 2017.
- *Boolean formulas, hypergraphs, and combinatorial topology*. UTK Junior Colloquium. January 19, 2017.
- *Seiberg-Witten invariants, Alexander polynomials, and fibred classes*. Joint Mathematics Meetings, Atlanta, GA. January 5, 2017.
- *Clifford algebras*. UCR Graduate Student Seminar. May 2, 2013.

COURSE WORK

Coursera: Deep Learning (deeplearning.ai), Data Science (Johns Hopkins), Applied Data Science with Python (University of Michigan), Ruby on Rails Web Development (Johns Hopkins), Full Stack Web Development (Hong Kong University of Science and Technology), Cryptography (Stanford), Robotics (University of Pennsylvania)

Mathematics: Differential Geometry, Algebraic Topology, Bayesian Analysis, Probability and Statistics, Differential Equations, Linear Algebra, Numerical Analysis, Combinatorics, Hyperbolic Geometry, Abstract Algebra, Knot Theory

Computer Science: Software Engineering, GUI Programming, Network Programming, Systems Programming, Computer Organization, Fundamental Algorithms, Data Structures, Theory of Computation