

Christopher LeBailly

Education

- June 2013 **M.A., Mathematics**, *University of California Santa Cruz*, Santa Cruz, CA.
Completed masters thesis studying coupled clocks and coupled chaotic oscillators.
- May 2008 **B.A., Mathematics and Music**, *Grinnell College*, Grinnell, IA.
Honors received for both majors. Cumulative GPA: 3.65 (Mathematics: 3.79; Music: 3.75).

Experience

Data Science

- July 2016 – Present **Senior Data Scientist**, *hiQ Labs*, San Francisco, CA.
- Developed new methodology for clustering related skills using resume data. Methodology was based on existing NLP techniques and models.
 - Designed d3 visualizations of skill clustering which have been used in production.
 - Presented research at hiQ Elevate conference in San Francisco and New York
 - Worked with experts in HR to design a new product which utilizes my research and fits needs of our customers.
- September 2014 – June 2016 **Data Scientist**, *hiQ Labs*, San Francisco, CA.
- Designed system to find on-line resume data and match to internal HRIS data
 - Engineered system to store customer data and integrated it with existing technology
 - Researched feasibility of new product ideas.

Teaching

- September 2010 – June 2013 **Teaching Assistant**, *University of California Santa Cruz*, Santa Cruz, CA.
- TA for Precalculus, Integral Calculus and Multivariable Calculus courses.
 - Conducted seven hours of sections per week. Helped students by going over homework problems and giving group work projects I prepared. Also held three hours of office hours per week.
 - Evaluated student performance by grading quizzes and exams.
- July 2012 – August 2012 **Summer Instructor**, *University of California Santa Cruz*, Santa Cruz, CA.
- Taught five week summer course on Integral Calculus.
 - Lectured three times a week, wrote and graded quizzes and exams, and held office hours.
 - Supervised a teaching assistant, who conducted sections and helped grade exams.
- August 2008 – June 2010 **Math Study Center Aide**, *Evanston Township High School*, Evanston, IL.
- The Math Study Center offers drop-in tutoring for students with varying math abilities.
 - Worked with an average of 50 students per day in courses from Algebra 1 to Linear Algebra.
 - Conducted ACT review sessions for minority students close to meeting standards in math.
 - Substitute taught for Calculus (single and multiple variables) and Linear Algebra.
- August 2008 – June 2010 **Math Team Coach**, *Evanston Township High School*, Evanston, IL.
- Wrote practice problems for the written and oral events. Oral events focus on solving problems and presenting coherent solutions to judges on advanced topics.
 - Graded homework for the Chicago chapter of the American Regions Math League.
- August 2009 – June 2010 **Teaching Assistant**, *Project Excite!*, Evanston, IL.
- A collaborative project between Northwestern University and Evanston Township High School which identifies talented minority students in third grade and nurtures their talents in math and science.
 - Helped facilitate sessions with the third graders and high school student assistants.
- 2008–2010 **Private Math Tutor**, Evanston, IL.
Tutored students in AB Calculus, Multivariable Calculus, and Linear Algebra.

- August 2005 – **Math Lab Tutor**, *Grinnell College*, Grinnell, IA.
 May 2008 Offered drop-in tutoring in Calculus and Linear Algebra.
 January 2005 **Math Study Center Tutor**, *Evanston Township High School*, Evanston, IL.
 Filled in for the director the week before final exams.

Skills

Programing

Fluent	Python, R, MongoDB, git	Familiarity	MatLab, Octave, SQL, d3.js
Dormant	C++, Mathematica		

Other

Typesetting	L ^A T _E X	Operating Systems	Linux, Mac OS X, Windows
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Research

- January 2013 – **Masters Thesis Research**, *University of California, Santa Cruz*, Santa Cruz, CA.
 June 2013
 - Wrote masters thesis on different modes of synchronization of periodic and chaotic oscillators.
 - Wrote programs in Python to model these different dynamical systems.
 - The thesis is available [here](#) and the code is available [here](#).
 June 2006 – **Student Research**, *Grinnell College*, Grinnell, IA.
 August 2006 Wrote paper on conditions need to perform surgeries (removing and adding vectors) on tight frames. Our paper is available [here](#).
 2003–2004 **Synchronization of Chaotic Oscillators**, *Evanston Township High School*, Evanston, IL.
 - Independent research using a computer simulation to study two weakly coupled double pendulums.
 - Received third place and scholarship at Chicago Junior Science and Humanities Symposium.

Professional Affiliations

- 2010-2013 **American Mathematical Society**.
 2008–2010 **Metropolitan Mathematics Club of Chicago**, Chicago, IL.

Professional Development

- January 2014 – **Massively Open Online Courses**, *Coursera*, *EdX*.
 Present Covered Machine Learning, Statistics, R programing, and Data Analytics. Participated in the *John Hopkins* Data Science Specialization.
 Fall 2013 **Bioinformatics Models & Algorithms**, *University of California Santa Cruz*, Santa Cruz, CA.
 An introductory graduate level course in Bioinformatics, taken through the UCSC Extension Program. The code written in this class is available [here](#).
 Summer 2012 **Mathematical General Relativity**, *Mathematical Sciences Research Institute*, Berkley, CA.
 Two week workshop on mathematical general relativity, which is the study of mathematical problems related to Einstein’s theory of gravitation.
 January 2010 **MMC Conference of Workshops**, Chicago, IL.
 Attended workshops in using games to present mathematical ideas to elementary school children, using complex instruction to provide academic access and success for all students in the classroom, and using Cabri to generate a multitude of conjectures about various properties of triangles.
 January 2009 **MMC Conference of Workshops**, Chicago, IL.
 Attended workshops in using paper folding to convey geometric concepts, how to make proofs meaningful to geometry students, and the derivation of the hyperbolic trig functions.

Volunteer

- March 2014 – **Cantu Queer Center Volunter**, *UC Santa Cruz*, Santa Cruz, CA.
June 2014 Helped with office work and helped draft a graduate job description for the follow school year.
- September 2013 – **Volunteer Cook & Server**, *Circle Church*, Santa Cruz, CA.
April 2014 Helped prepare and serve meals for homeless.
- December 2009 & **Habitat for Humanity**, *Evanston Township High School*, Chicago, IL.
May 2010 Chaperoned a group of students for the day to work on a project house.
- January 2007 **Alternative Break**, *Grinnell College*, Chicago, IL.
Spent a week with other Grinnell students working with various organizations regarding homelessness.
- September 2002 – **Volunteer Tutor**, *Evanston Township High School*, Evanston, IL.
June 2004
 - Tutored an Algebra 1 student in danger of failing (she earned a B) in 2002-2003 school year.
 - Tutored two students in Trigonometry and one in Calculus in 2003-2004 school year.

Awards

- April 2007 **Hill Distinguished Award in Music**, *Grinnell College*, Grinnell, IA.
- Fall 2007 **Iowa Collegiate Mathematics Competition**, 5th Place.
- Fall 2006 **Iowa Collegiate Mathematics Competition**, 3rd Place.
- November 2006 **Mathematical Contest in Modeling**, Honorable Mention.
- March 2004 **Junior Science and Humanities Symposium**, 3rd Place.
Received award and scholarship for research on “Synchronization of Chaotic Oscillators.”
- November 2003 **High School Mathematical Contest in Modeling**, National Outstanding.
Contest paper published in COMAP’s *Consortium 86*, pages 36-41.
- November 2002 **High School Mathematical Contest in Modeling**, Regional Outstanding.