

# Kevin Lui

kevinlui.org

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## EDUCATION

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- **University of Washington** Seattle, WA  
*Ph.D. in Mathematics (advisor: William Stein)* *Sep. 2014 – Jun. 2019 (expected)*
- **University of California, Santa Barbara** Santa Barbara, CA  
*Bachelors in Mathematics* *Sep. 2010 – Jun. 2014*

## EXPERIENCE

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- **University of Washington** Seattle, WA  
*Researcher and Teaching Assistant* *Sep. 2014 - Present*
  - **Research - Computational number theory:** Created and implemented algorithms for computing invariants used in the study of abelian varieties. Algorithms are implemented in Sagemath - an open source computer algebra system.
  - **Linear algebra instructor:** Instructor for both advanced and introductory linear algebra class. Assigned homework, created and graded exams, determined final grades.
  - **WXML Graduate mentor:** Graduate mentor for 3 undergraduates on a Python tiling project. Helped students with both the theoretical and programming aspects of the project.
  - **Teaching assistant:** Teaching assistant for various calculus classes. Helped students on homework, graded quizzes and exams.
  - **Grader:** Grader of an upper division topology course. Graded homework and held office hours.
- **Sagemath (Python library/Computer algebra system)** Online  
*Developer* *Jun. 2016 - Present*
  - **Modular Abelian Varieties:** Ongoing improvements to the modular abelian variety package of Sagemath. Regularly adding new features, fixing bugs, and improving code style (pep8). The modular abelian variety package is heavily used in my thesis. Development is done through tickets on the Sagemath trac server.
  - **Orders of Number Fields:** Implementation of the class of non-maximal orders of number fields. This code will eventually help me on a research project. Development is done on my own Github fork.
  - **Google Summer of Code:** Spent a summer with a mentor (William Stein) improving the modular abelian variety package of Sagemath. Algorithms were extracted from research papers and Magma. Development was done on Github and then later merged into the Sagemath trac server.

## LINKS TO PROGRAMMING PROJECTS

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- Follow links here: kevinlui.org

## PROGRAMMING SKILLS

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- **Languages:** Python, Sage, Latex, Bash **Technologies:** Linux, PostgreSQL, Git, Vim