**Eric Keefe**

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**EDUCATION**

**Willamette University (WU)** Salem, Oregon

*Mathematics and Computer Science (3.93 /4.0)* August 2015-present

* Awarded highest academic scholarship
* Awarded Kenneth Batchelder Memorial Computer Science Scholarship
* Relevant coursework: Intro to Programming, Intro to Functional Programming, Data Structures, Computational Science, Architecture and Compilers, Analysis of Algorithms, Computer Graphics, Junior Seminar
* **Athletics:** Varsity Men’s Soccer team: started 17/25 games since sophomore season
* **Music:** Percussion Ensemble (Spring Semester 2016)

**Victoria University of Wellington** Wellington, New Zealand

*(4.08/4.0)* March 2015-July 2015

* Awarded Vice Chancellor’s Scholarship
* Relevant Coursework: Accelerated Java Programming (4.0/4.0)
* Also completed Mathematics Acceleration and Extension at the University of Auckland (4.3/4.0)

**WORK EXPERIENCE**

**Software Security REU at Boise State University** Boise, Idaho

* Created a framework for parallel data flow analysis by extending soot’s June 2017-July 2017

ForwardBranchedFlowAnalysis abstract class

* Implemented this framework with a reaching definitions analysis, and compared runtimes when using our parallel framework, another parallel framework, and a nonparallel framework
* Presented my work at the [Idaho Conference on Undergraduate Research](https://academics.boisestate.edu/icur/) and at [WU’s computer science tea](http://willamette.edu/cla/cs/students_alumni/cs_tea/index.html)

**Adobe Dreamweaver Instructor** Salem, Oregon

* Designed and taught a week-long course in Adobe Dreamweaver July 2016
* Students built a simple website using bootstrap components but also worked with HTML and CSS code

[**CodeHS**](https://codehs.com/) **Tutor** Salem, Oregon

* Graded high school student’s assignments March 2016-September 2017
* Worked through content in order to be able to grade more advanced assignments

**GROUP PROJECTS**

**Dungeon Map Generator** (fall semester sophomore year)

* Uses MATLAB to pseudo-randomly generate dungeon maps, each of which contain an entrance, an exit, a key, and a locked door
* Presented at [Student Scholarship Recognition Day](http://willamette.edu/cla/additional-academic-opportunities/ssrd/index.html)

**A Star Search Algorithm** (spring semester sophomore year)

* Uses Java to implement and visualize the A star algorithm
* Allows the user to construct walls, then finds the shortest path between two points

**Music Visualization** (fall semester junior year)

* Currently uses JavaScript and HTML to visualize music in a basic manner
* Our goal is to load any song, extract the melody, and generate a game based off this melody

**Programming Languages**: Java, JavaScript, Matlab, HTML, Latex, Haskell, Processing, Corona, R, Maple, Ubuntu/Linux, CSS, Git

**High School Awards:** Cambridge Math (1st 2013, 1st 2011, 3rd 2010), English (1st 2013), Barnicoat Prize for Senior English Literature (2013), [Australian Math Competition](http://www.amt.edu.au/) (Distinction 2013, High Distinction 2011); [ICAS](http://www.eaa.unsw.edu.au/icas/subjects/science) Science Assessment (High Distinction 2011); Eton Press Casio Senior Mathematics Competition (Top 100 in 2012), Victoria University Mathematics Competition (1st place team 2014), Mathswell (Wellington Region Mathematics Competition)(2nd place team 2010, 2011, 2012)