

## **Course Developer** Udacity Inc. Mountain View, California.

**February 2015–January 2017**

- Created online courses that attracted tens of thousands of enrolled students. Responsible for all stages of course creation: outlining, scripting, creating sample code and exercises, and finally appearing on camera and screencasts.
- Instructor of *Gradle for Android and Java*, *2D Game Development with libGDX*, and *How to Make a Platformer Using libGDX*. Contributed scripts and sample code to *Developing Android Apps* and *Android Basics: Networking*, made in partnership with Google.
- Developed a sample code delivery system that allows instructors to create and maintain an idealized Git history for students to follow along with.
- Completed five Nanodegrees as a Udacity student, including the Android Developer Nanodegree, and the Machine Learning Engineer Nanodegree.

## **Course Manager** Udacity Inc. Mountain View, California.

**April 2014–February 2015**

- Mentored students in numerous courses including *Intro to Data Science*, *Developing Android Apps*, *Software Architecture and Design*, and *Intro to Hadoop and MapReduce*.
- Led testing and quality assurance of *Intro to Machine Learning*, *Data Visualization*, and *Model Building and Validation*.

## **Hardware Laboratory Intern** Allion USA, Portland, Oregon.

**January 2014–April 2014**

- Built stages of a machine vision pipeline for real-time processing of high speed camera output.
- Invented a class of ternary/n-ary codes with desirable Hamming distance properties.

## **Scientific Applications Intern** Apple Inc. Portland, Oregon.

**June 2011–August 2013**

- Developed novel algorithms with the Advanced Computation Group in the fields of sound compression, image compression, image enhancement, machine vision, and error correction coding.
- Created 3D scanning and printing laboratory and wrote tools for interactive markup of 3D meshes.
- Coinvented, prototyped, and wrote patent documentation for a novel image magnification algorithm. Collaborated on a real-time OpenCL implementation of the algorithm.

## **Senior Reactor Operator** Reed Research Reactor, Portland, Oregon.

**August 2009–May 2011**

- As Requalification Supervisor, created and administered written and practical exams to the staff, gave training and requalification lectures, and founded an enrichment lecture series.
- Performed and supervised reactor power changes, control rod and fuel inspections, thermal power calibration, refueling operations, and neutron activation analysis experiments.

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## **Reed College BA, Physics.** Portland, Oregon.

**May 2011**

- Thesis on the use of numerical differential equation solving and genetic algorithms to simulate and optimize human movement.
- Projects included measuring the temperature dependence of diode reverse bias leakage current, improvised synthesis of fullerenes using a welding power supply, and creation of an interactive computer model simulating the interaction and collision of charged particles.

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## **Skills**

- Python, Java, C, C++, Objective-C, Swift, SQL, HTML, CSS, and JavaScript.
  - Android, Google AppEngine, Polymer, OpenGL/CL/CV, libGDX, SKLearn, and NLTK.
  - Git, Mercurial, Gradle, Mathematica, MATLAB, LabVIEW, and  $\text{\LaTeX}$ .
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