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# Jeremy Silver

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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.
  - Course work in calculus, linear and abstract algebra, scientific computation, electrodynamics, elementary particles, as well as classical, quantum, thermal, and solid-state physics.
  - 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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**Course Developer** Udacity Inc. Mountain View, California.

**February 2015–Present**

- Created UD867: Gradle for Android and Java, an online course with over 10,000 enrolled students.
  - Built a forthcoming Java game development course in partnership with Amazon.
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**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 Developing Scalable Apps in Java.
  - Lead testing and quality assurance on Intro to Machine Learning, Data Visualization, and Model Building and Validation.
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**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.
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**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.
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**Requalification Supervisor** Reed Research Reactor, Portland, Oregon.

**May 2010–May 2011**

- Created and administered written and practical exams to the staff, gave training and requalification lectures, and founded an enrichment lecture series.
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**Senior Reactor Operator** Reed Research Reactor, Portland, Oregon.

**August 2009–May 2011**

- Performed and supervised reactor power changes, calibrated radiation monitors, and performed neutron activation analysis experiments.
  - Participated in control rod and fuel inspections, thermal power calibration, and refueling operations. Organized and performed recovery of a dropped fuel element.
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## Skills

- Python, Java, Objective-C, with C, C++, Swift, SQL, HTML, CSS, and JavaScript.
  - Android, Google AppEngine, Polymer, OpenGL/CL/CV, LibGDX, SKLearn, and SceneKit.
  - Git, Mercurial, Gradle, Mathematica, MATLAB, LabVIEW, and L<sup>A</sup>T<sub>E</sub>X.
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