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Jeremy Silver

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.
- Laboratory work in electronics, optics, kinematics, electromagnetism, and machine tooling.
- Projects included measuring the temperature dependance 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.

Hardware Lab Intern Allion USA, Portland, Oregon. **January 2014–Present**

- Worked on real-time framework for machine vision processing of high speed camera output.
- Developed novel class of trinary/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.
- Set up 3D scanning and printing lab and created 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.

Requalification Supervisor Reed Research Reactor, Portland, Oregon. **September 2007–June 2011**

- Created and administered written and practical exams to the staff, gave training and requalification lectures, maintained requalification database, and founded enrichment lecture series.
- As a licensed Senior Reactor Operator, performed reactor maintenance, led tours, operated and supervised reactor operation, calibrated radiation monitors, and performed neutron activation analysis experiments.
- Participated in control rod inspection, thermal power calibration, fuel inspection, and refueling. Organized and performed recovery of a dropped fuel element.

Student Engineer US Nuclear Regulatory Commission, Washington DC. **June–August 2009**

- Wrote and contributed to numerous reports and white papers including an assessment of the safety hazards associated with the aqueous homogeneous reactor type and its viability for producing radiopharmaceutical precursors.
- Assisted in inspections of the NIST and UNM research reactors and contributed to the relicensing safety evaluation report of the latter.

Software and Electronics Skills

- Window, OSX, Ubuntu, Microsoft Office/OfficeLibre, LaTeX, Mathematica, MATLAB, LabVIEW, GammaVision, InkScape, Audacity, Git, and Mercurial. Xcode, Visual Studio, Wolfram Workbench, and Eclipse.
- C, C++, Objective-C, Java, and OpenCL. Cocoa, SceneKit, OpenGL, OpenCV.
- Digital oscilloscope, computer controlled multimeter and breadboard, function generator, AC/DC power supply, stage lighting, audio mixing board, soldering, basic circuit design, computer hardware and networking.