EDWARD KEYES

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SUMMARY

MIT-educated physicist and independent programmer looking for interesting projects in science and technology.

EDUCATION

Massachusetts Institute of Technology   *Cambridge, MA*   *9/1996-1/2005*

Ph.D. program in physics, degree not completed (GPA: 5.0/5.0).
Karl Taylor Compton Fellowship, National Science Foundation Fellowship.
Studied under Dr. Edmund Bertschinger on large-scale astrophysical simulations, structure formation, gravitational lensing, and radiative transfer, and later under Dr. Bruno Coppi on plasma astrophysics, magnetohydrodynamics, and accretion-disk physics. Work published in the *Astrophysical Journal*.
President of the MIT Science Fiction Society (2002-2004): oversaw a staff of ~30 volunteer librarians to run the world's largest library of science fiction and fantasy.
Classroom instructor (2000-2001): created and gave regular lectures in freshman physics, tutored students individually, and supervised laboratory experiments.

Vanderbilt University   *Nashville, TN*   *9/1992-5/1996*

B.S. degrees in physics and mathematics, minor in computer science (GPA: 3.987/4.0).
Harold Stirling Vanderbilt Honor Scholarship, McMinn Honors Scholarship in the Natural Sciences.
Graduated *summa cum laude*. Ranked 2nd in class of 807.

EXPERIENCE

insani   *Ann Arbor, MI*   *5/2004-present*

Co-founder and chief technical officer of a non-profit translation group, adapting Japanese video games for the English market. Reverse-engineered binary data formats and executable code, and created tools to patch games with new content. Performed script editing, graphics modification, server administration, and some translation.

DaggerWare   *Cambridge, MA*   *7/1996-9/2005*

Sole proprietor and lead programmer of an independent shareware company to create and distribute software for Palm handheld devices. Wrote the award-winning utility program HackMaster, with an estimated 2,000,000 users. Invited speaker at the 1998 PalmSource Developer's Convention.

Massachusetts Institute of Technology Media Laboratory   *Cambridge, MA*   *6/2001-10/2001*

Research technician, continuing a multi-year volunteer relationship with the Media Lab wearable computing group. Developed a custom low-power video driver solution for a heads-up display, including integrated Linux kernel patches, FPGA logic code, and a mixed-signal circuit board. Constructed a MIThril wearable computer system including custom dual keyboard drivers and Palm interface.

LandWare, Inc.   *Paramus, NJ*   *5/1998-9/2002*

Contract programmer: developed the driver for the GoType! hardware add-on keyboard for Palm devices. Later expanded the driver to include Hebrew and Japanese input systems. Product is still being sold.

Textware Solutions   *Burlington, MA*   *3/1998-6/1999*

Contract programmer: developed an on-screen-input system extension for Palm devices using the Fitaly stylus-optimized letter layout. Product generated revenue for 6 years.

Fermi National Accelerator Laboratory   *Batavia, IL*   *6/1995-8/1995*

Summer research fellow: simulated, tested, constructed, and installed time-of-flight organic scintillator detectors as part of an upgrade to the Tevatron particle accelerator.

Vanderbilt University   *Nashville, TN*   *6/1994-8/1994*

Scientific programmer: optimized existing work on the computation of electric fields around DNA molecules, resulting in a software speedup of 8000 times, and developed a custom 3D visualization engine to present the data. Later expanded to a senior thesis under Dr. Glenn Edwards.

Oak Ridge National Laboratory   *Oak Ridge, TN*   *6/1993-8/1993*

Summer research fellow: designed and constructed a prototype gas-mixing and -control system for a drift-chamber particle detector. Performed materials testing and simulation for other detector elements.

SKILLS

Programming in: C/C++, Perl, Python, Mathematica, PHP, PostScript, assembly, Scheme, Fortran, Pascal, BASIC.
Application development and system administration for: Linux (both desktop and embedded), PalmOS, MacOS, microcontrollers, BeOS.
Circuit design and fabrication: both analog and digital, Eagle CAD, VHDL, AHDL.
Desktop and web publishing: HTML, CSS, LaTeX, Photoshop, Illustrator, FreeHand, various word processing and office applications.
Writing and editing: scientific publications, presentations, technical documentation, journalism, and fiction.