

Jonathan C. Shea

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Education

B.A. *Physics*, Dartmouth College, Hanover, NH June 2003
Course work: Numerical Methods, Digital System Identification and Control, Discrete-Time Signal Processing, Electricity and Magnetism, Plasma Physics

Experience

ExpanDrive Inc. *Developer and Junior Partner*
Cambridge, MA 2007-2010

Co-developer of Strongspace, an online file sharing and backup service built with Ruby on Rails. Developed an online AJAX file browser with jQuery. Implemented a system for subscription billing and payment processing. Developed the user account settings and preferences interfaces. Designed and built an XML/JSON API. Extensive experience with Linux and web service stacks.

Co-developer of ExpanDrive, an FTP/SFTP remote filesystem for Mac OS X. Primary developer for ExpanDrive's Objective-C GUI. Also developed and maintained the installer, license and registration system, password management, and Finder contextual menu plugin. Architect and developer of a Python framework for building desktop applications. Scripted, recorded, and produced a screencast demonstrating the product. Assisted with technical support, documentation, and customer satisfaction.

Thayer School of Engineering at Dartmouth *M.S. Candidate*
Hanover, NH 2005-2007

Designed and built a quantitative, physics-based model for magnetic perturbations resulting from electrical currents in the Earth's ionospheric plasma. Developed innovative visualization techniques for large, multivariate data sets in two and three dimensions. Extensive numerical programming in MATLAB and IDL, including the manipulation of very large data sets. Simulation results were compared to time-series observations to answer questions of causality, test theoretical predictions, and validate other computer models.

Outdoor Programs Office *Director, Dartmouth Outting Club Trips*
Dartmouth College, Hanover, NH 2002-2003

Director of the largest collegiate orientation outting program in the country. Recruited, trained, and managed 220 volunteer trip leaders and 40 full-time logistical volunteers. Achieved participation from more than 90% of incoming students, a 4% improvement over previous years. Coordinated trip assignments, transportation, food, equipment, and all other logistics. Improved data management and mailing systems. Reduced transportation costs by 9% by eliminating unnecessary bus trips.

Kinetic Books *Writer*
Seattle, WA Summer 2002

Authored content for a DVD-based interactive physics textbook. Revised and edited chapters on vector mathematics and electrostatics. Designed, illustrated, solved, and wrote explanations for in-text problems and examples. Developed interactive problem tutorials.

Ledyard Canoe Club *Business Director*
Dartmouth College, Hanover, NH 2000-2001

Oversaw a \$90,000 per season canoe rental business. Recruited, trained, and managed a staff of 12. Developed, advertised, and directed special events and promotions. Recruited 126 first-time members in membership drive. Maintained rental fleet and physical plant of business.