

# BURTON J. DEWILDE

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## EDUCATION

**Stony Brook University; Stony Brook, NY** 08/2007 – 08/2012  
Ph.D. in Physics

**Kalamazoo College; Kalamazoo, MI** 09/2003 – 06/2007  
B.A. in Physics and Spanish, minor in Applied Math; *Summa cum Laude*, Honors in Physics

## WORK EXPERIENCE

**Data Scientist** 12/2012 – Present  
*Harmony Institute; New York, NY*

Data geek studying how narrative media affects people and society. Fetch, munge, clean, organize, analyze, visualize, communicate data. Key skills: web scraping, database management, social network analysis, natural language processing, and data analysis in Python and R.

**Co-Producer, Director of Photography, and Editor: “Decay”** 03/2011 – 10/2012  
*H2ZZ Productions; www.decayfilm.com*

Managed cast and crew of 30+ people in making feature-length, physics-themed zombie movie. Filmed on-site at CERN. Edited in Adobe Premiere Pro. Actively contributed to all aspects of production and post-production, from casting to scheduling and visual effects to marketing.

**Item Writer: Physics I with Lab** 06/2012 – 09/2012  
*University Now, Inc.; www.unow.edu*

Authored exam questions to effectively assess student learning objectives. Produced custom calculations and figures in SciPy and Adobe Photoshop. Self-directed and -motivated.

**Research Assistant: Particle Physics, ATLAS Experiment** 05/2008 – 08/2012  
*Stony Brook Physics & Astronomy Dept.; Stony Brook, NY*  
*European Organization for Nuclear Research (CERN); Geneva, Switzerland*

Tested hardware and contributed to development of C++-based data acquisition/analysis software for prototype silicon sensor detectors. Primary analyst in search for hypothetical particles of Nature called “leptoquarks”: optimized signal selection criteria, computed log-likelihood ratio discriminant, performed extensive error analysis. Developed and maintained a Python-based, batch-processing data analysis framework to handle large-statistics datasets.

**Teaching Assistant: Physics for Life Sciences I & II** 09/2007 – 05/2008  
*Stony Brook Physics & Astronomy Dept.; Stony Brook, NY*  
Led two weekly laboratory sessions of 25 students each. Assisted students with homework assignments, graded lab reports, and proctored and graded exams.

**Computer Lab Supervisor** 10/2003 – 06/2007  
*Kalamazoo College Information Services; Kalamazoo, MI*

Supervised and evaluated job performance of 20+ lab assistants each year. Maintained security and functionality of 4 computer labs. Assisted students with hardware/software problems.

## **SKILLS**

- Programming in Python, C++, Java, and NI LabVIEW
- Numerical analysis, modeling, and machine learning in R, SciPy, ROOT, and GNU Octave
- Experienced in Mac OS X, MS Windows, and Scientific Linux; Microsoft Office, Apple iWork, and LaTeX; and Adobe Photoshop, Premiere Pro, and After Effects
- Familiar with web development (HTML/CSS, JavaScript), relational databases (mySQL), version control (SVN, Git), and Map-Reduce paradigm
- Proven ability to acquire new technical skills, analyze large datasets, clearly visualize data, and work both collaboratively and independently
- Excellent written and verbal presentation skills: lead author on multiple publications, speaker at two international physics conferences, and web blogger ([datasciencerules.blogspot.com](http://datasciencerules.blogspot.com) and [www.quantumdiaries.org/author/burton-dewilde](http://www.quantumdiaries.org/author/burton-dewilde))
- Freelance photography, with emphasis on candid portraiture in non-traditional settings
- Fluent in Spanish, proficient in French

**List of references and publications available upon request.**