

Nick Klosterman

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EDUCATION ♦ **Purdue University**, West Lafayette, IN
Master of Science in Electrical Engineering, August 2010

♦ **University of Illinois at Urbana-Champaign**, Urbana, IL
Bachelor of Science in Electrical Engineering, August 2001

WORK ♦ **Research Assistant**, Purdue University August 2007 - July 2010

EXPERIENCE · Updated weather visualization software with requested features from Purdue University's Earth & Atmospheric Sciences faculty.

· Implemented data color coding to allow for easier analysis of convection paths in simulation datasets.

· Implemented pop-up of 2D image slice of selected convection path.

· Co-developed education module that discussed pros, cons, and pitfalls associated with various software visualization techniques.

· Presented education module to Indiana Teachers as part of a workshop emphasizing computer visualization in the classroom.

· Presented Google Maps visualization exercise to Indiana High School students. The exercise demonstrated the geographic effect of a terrorist act in an urban and rural setting as part of a Homeland Security class.

♦ **Quality Engineer**, Siemens Energy and Automation, Bellefontaine, OH 2007

· Analyzed customer's returned materials establishing root cause of failure.

· Evaluated failures, identified solution, and implemented corrective action on manufacturing line.

· Wrote technical documents reporting root cause failure of product to customer.

· Conducted ongoing product reliability testing.

· Implemented real time reliability plan to support product build up prior to plant shutdown.

· Improved Visual Basic code for MS Access database to streamline data logging of samples and to make report generation easier.

♦ **Qualification and Integration Engineer**, IBM & JDS Uniphase, Rochester, MN 2001 - 2006

· Performed optical to electrical and electrical to optical characterization tests on 1 Gb/s, 2 Gb/s, and 4 Gb/s fiber optic transceivers to prove compliance with Fibre Channel and Gigabit Ethernet standards. Tests included: Fiber coupled power, optical deterministic jitter, stressed receiver sensitivity, and mask margin.

· Modified LabVIEW code to accommodate new products and additional tests.

· Co-developed software to allow customer to interface with transceiver's onboard microprocessor. Provided live graph functionality as well as status notification of key onboard characteristics.

- Led review of product qualification report with lead engineers and product manager.
 - Wrote software to automate qualification report generation from MS Access database.
 - ◇ **Volunteer Research Assistant**, Mayo Clinic, Rochester, MN 2005
 - Developed software module for in house ANALYZE software suite allowing for analysis of Computed Tomography images.
 - Module performed kidney stone detection and sizing to determine health risk score for patient.
 - Volunteered time to learn more about commercial applications of image analysis.
 - ◇ **Wright-Patterson Air Force Base**, Dayton OH 2000
 - Developed Java applet simulating unmanned autonomous vehicles.
 - Implemented flocking algorithm to control vehicle interaction.
- PROJECTS
- ◇ **Backcountry.com Deal of the Day Tracker 2011**
 - Wrote software to track deals of the day appearing on Backcountry.com's four outdoor & sports deal websites and notify users when items of interest are featured.
 - Alerts based off of keyword matching are sent via text message or email.
 - Details of featured deals logged to a MySQL database.
 - Developed online front-end to allow for users to add their own notifications as well as to view past product details from the product database.
 - Viewable online at <http://www.djinnius.com/Deals>.
 - ◇ **Kindle and Android Comic Converter for Kindle and Android 2012**
 - Program optimizes comic archives for viewing on Kindle's grayscale screen and for color Android devices.
 - Program utilizes Imagemagick libraries and can perform any Imagemagick function to optimize or refine images.
 - Program can be run recursively optimizing any comic archives found. Can delete original archive upon completion to minimize disk usage.
 - ◇ **Investor's Business Daily 100 Stock List Financial Visualization 2011**
 - Project analyzes advertised returns of Investor Business Daily 100 stock list versus what return a typical investor might experience.
 - Stock movements and rankings visualized to show movement of stocks onto and off of stock list.
 - Leveraged Prefuse visualization package for rapid construction of data visualization.
- SKILLS
- ◇ C++, Java, Bash scripting, MySQL, Visual Basic, HTML, Arduino uC, Python, Scheme, Git, SVN, SQLite
 - ◇ MATLAB, LabVIEW, GNUPlot, L^AT_EX 2_ε
 - ◇ *nix, Microsoft, Macintosh
 - ◇ Digital Oscilloscope, Pattern Generator, Spectrum Analyzer
- PUBLICATIONS
- Arthur, D., Lasher-Trapp, S., Abdel-Haleem, A., Klosterman, N., Ebert, D., "A New Three-Dimensional Visualization System for Combining Aircraft and Radar Data and its Application to RICO Observations," Proceedings, 15th International Conference on Clouds and Precipitation 2008
- Maciejewski, M., Kim, S., King-Smith, D., Ostmo, K., Klosterman, N., Mikkilineni, A., Ebert, D., Delp, E., Collins, T., "Situational Awareness and Visual Analytics for Emergency Response and Training," IEEE International Conference on Technologies for Homeland Security, 2008.

- HOBBIES
- ◇ Member Ghisallo Cycling Team 2011-2012
 - ◇ Avid Triathlete and Cyclist - Achieved 1st in Age Group at Caesar's Creek Triathlon 2011
 - ◇ Private Pilot License holder and Aviation Enthusiast