

# 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**
    - 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>.
  - ◇ **Investor's Business Daily 100 Stock List Financial Visualization**
    - 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,
  - ◇  $\text{\LaTeX}$ , MATLAB, LabVIEW, GNUPlot
  - ◇ \*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
- ◇ Avid Triathlete and Cyclist - Achieved 1st in Age Group at Caesar's Creek Triathlon 2011
  - ◇ Private Pilot License holder and Aviation Enthusiast