

Robert Clayton Barnes

clay@hci-matters.com / 1.321.252.9284 (cell)

22c Hollandale Lane, Clifton Park, NY, 12065

Passionate interface architect with expertise in data visualization, user experience design, and usability testing—as well as diverse programming experience and a drive to innovate

- Education**
- Human-Computer Interaction M.S.**, Rensselaer Polytechnic Institute (3.85 GPA) Dec 2009
 - Computer Science B.S.**, University of Arizona May 2008
 - Linguistics B.A.**, University of Arizona May 2008
- Professional Experience**
- User Interface Architect**: GE Energy (*Schenectady, NY*) Feb 2010–Aug 2011
- Architected, designed, and coded innovative analytical tools which illuminate key patterns from databases spanning years of sensor data from diverse sources across cutting-edge wind turbines
 - Unified essential elements of scattered troubleshooting tools into a single intuitive interface, clarifying relationships and uniting work with flexible, discoverable interactions
 - Created new monitoring interfaces to drive user awareness of time-crucial information while reducing cognitive load and avoiding unnecessary demands on operator attention
 - Redesigned complex, established wind turbine control/monitoring software to enhance the user experience and efficacy, balancing design innovations with established expectations
 - Provided rapid, high-value user experience improvements to widely varying applications/websites to maximize efficacy within limited time and resources for interface development
- User Experience Contractor**: Intrigo (*Tucson, AZ*) Aug 2006–May 2008
- Revised and created UIs for maximum usability and improved experience
 - Designed and implemented a customer software manager for installation, upgrade, and deployment from version-controlled developer repositories
- Other Experience**
- Author**: *New Interface Advocate*, at <http://www.hci-matters.com/blog> 2007–Present
- Explores both theory and application of Human-Computer Interaction (HCI)
 - Traffic exceeds 100,000 unique visitors per year
- Open-Source HCI**: *Lumiera Editor, OpenBox Window Manager, C*mus Player* 2006–Present
- Ongoing usability work with these and other mature projects
- Software**
- Programming*: C, C++, C#, Java (including Android SDK), JavaScript, Prolog, PHP, Ruby, Silverlight, Shell Scripting, SML/NJ
- Markup/Query*: CSS, Regular Expressions, MySQL, XHTML
- Packages*: Adobe Creative Suite (Acrobat Pro, Illustrator, InDesign, Photoshop, Premiere), Eclipse, Expression Studio, GNU development toolchain, GIMP, Inkscape, L^AT_EX 2_ε, Ruby on Rails 3, Vim, Version Control Systems (cvs, mercurial, and subversion), Visual Studio 2010
- OS Experience*: Linux (RPM and DEB distributions), MacOS, Windows (through version 7)
- Coursework**
- HCI*: Foundations of HCI (*Human-Computer Interaction*), Theory and Research in HCI, HCI Prototype Production, Studio Design in HCI, Information Architecture, Communication Design for the World Wide Web, Human-Media Interaction
- Programming*: Comparative Programming Paradigms, Computer Architecture and Assembly Programming, Network Theory and Programming, System Programming and UNIX, Operating System Design and Development
- CS Theory*: Object-Oriented Design, Programming Datastructures, Algorithm Design and Proofs