

Egg Davis

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Passionate software engineer with particular interests in domain-specific languages, data analysis, and visualization. In search of an opportunity to work on interesting problems with smart people.

Employment

Software Engineer, Climate Reference Network 2008 – 2012
National Climatic Data Center, Asheville, NC

- Developed and implemented a new sensor fusion algorithm enabling increased accuracy of precipitation measurement for the United States (Jython, Java).
- Designed and implemented a domain-specific language enabling climatologists to obtain, filter, analyze, and visualize climate data using Jython to leverage existing Java infrastructure (Jython, Java).
- Designed and implemented Flex visualizations of climate data, including two novel visualization techniques (ActionScript, Java).
- Maintained and developed codebase for data ingest from 200+ climate stations; achieved eightfold increase in data ingest efficiency (Perl).
- Spearheaded improvements to development practices as team grew, notably unit testing and code review.

3D Modeling for Environmental Simulation 2006 - 2008
National Environmental Modeling and Analysis Center, Asheville, NC

- Modeled local architecture using SketchUp and integrated models into simulation contexts to support local decision-makers with zoning changes.
- Investigated tools for modeling and immersive real-time simulation of flooding and traffic analysis.
- Developed wiki on integration of GIS tools and game engines.

Independent Contractor: Programming, Video, 3D Modeling, Web, Print Design 2002 - 2006
Various clients including University of North Carolina.

- Diverse range of specific contracts ranging from promotional video to extension and modification of large existing codebase to photography to logo design. Client roster included UNCA, PlayAttention, Recyclone, and Schlubach & Scharf.

Education

University of North Carolina at Asheville 2007
Bachelor of Science, Computer Science (Magna Cum Laude)
Bachelor of Arts, Multimedia Arts and Sciences (Magna Cum Laude)
Temple University, Philadelphia, PA 1995
Bachelor of Arts, Philosophy (Magna Cum Laude)

Projects

Long-standing interest in generative art and music. Released five albums of original music, based partially on generative processes.
Major year-long grant resulting in generative sculptural objects based on cellular automata.
Several undergraduate research projects focused on generative art.
Chair, Media Arts Project event programming committee.
Member, HUB Project technology task force.