Adrian Mayorga

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Education

Masters of Science in Computer Science ~ *University of Wisconsin-Madison ~ Madison, WI* 2009-2011

- GPA: 3.40/4.00

Bachelors of Science in Computer Science ~ *University of Texas at Austin ~ Austin, TX* 2004-2008

- Special Departmental Honors: Turing Scholars Honors Program
- Honors Thesis: "A Combined Approach to Subsurface Scattering"
- GPA: 3.59/4.00
- ftp://ftp.cs.utexas.edu/pub/techreports/honor_theses/cs-08-03-mayorga.pdf

Experience

Academia

Graduate Researcher ~ *CIBM Training Program - University of Wisconsin-Madison ~ Madison, WI* 2010-2012

- Perceptually-motivated abstraction techniques for large amounts of scatter plot data.
- Using sketch based techniques for animation and modeling, making it easier to create high quality animations

Graduate Researcher ~ *AOF Program - University of Wisconsin-Madison ~ Madison, WI* 2009-2010

- Developed a new technique for computing the solvent excluded surface of a protein based on level set methods

Industry

Software Developer ~ *Epic ~ Madison, WI* 2013-Now

- Part of the EpicCare Inpatient team.
- Responsible for maintaining and enhancing clinical functionality used by nurses and doctors.
- Full stack developer, UI, business logic, database server

Software Developer ~ *Schlumberger Information Solutions ~ Houston, TX* 2008-2009

- One of three developers in a team creating a domain specific database administration tool.
- Responsible for some UI and business logic layer features.

Software Developement Intern ~ *IBM ~ Austin, TX* Summer 2007

- Maintained and added functionality to demo programs.
- Created documentation for development framework.

Projects and Research

Splatterplots 2010-2012

- Uses perceptual and abstraction techniques to allow the visualization of massive multidimensional datasets.
- Abstraction is performed in visual space instead of data space. Allows for management of visual clutter in scatter plots.
- http://graphics.cs.wisc.edu/Papers/2013/MG13/

Harmonious Spring 2011

- Uses harmonious color templates and optimization techniques to automatically create sets of colors that work well together but are as perceptually different as possible
- http://pages.cs.wisc.edu/~adrm/Harmonious/applet/

HOT CoCo Fall 2010

- Hierarchical Focus + Context Code Coverage Visualizer. Uses a the intrinsic hierarchical nature of code to automatically group the code into a hierarchy
- Code coverage information is shown at each level, with visual pointers to sibling and parent levels to keep the contex

Volumetric Calculation of Solvent Excluded Surfaces Fall 2009

- Computes the solvent excluded surface of a molecule using a signed distance transform and morphological operations.
- Slower than current methods, but more robust and can handle larger molecules.

Publications

Adrian Mayorga and Michael Gleicher . "Splatterplots: Overcoming Overdraw in Scatter Plots." IEEE Transactions on Visualization and Computer Graphics. 19(9), 2013
http://graphics.cs.wisc.edu/Papers/2013/MG13/splatterplots-final.pdf

Adrian Mayorga, Supervised by Donald Fussell . "A Combined Approach to Subsurface Scattering." Department of Computer Sciences, University of Texas at Austin. June 2008
ftp://ftp.cs.utexas.edu/pub/techreports/honor_theses/cs-08-03-mayorga.pdf

Skills

Programming Languages
C#, C, C++, Javascript, M/Cache, SQL, VB, Haskel, Scheme, Java, Python, HTML/CSS, Matlab

Frameworks / Libraries
OpenGL/GLSL, WebGL, ASP.Net, AngularJS, Bootstrap, G3D, OpenTK, Qt, Boost

Programming Technologies
Visual Studio, Eclipse, SVN, Git, Hg