

BENJAMIN MCMAHAN

PROFILE

Fun and passionate problem solver with a strong educational background in mathematics and computer science. Currently seeking a creative outlet for my energy for and knowledge of artificial intelligence, algorithms, mathematics, and game theory. Skilled programmer, quickly adaptable to any language, and very aware of optimizations and computation complexity subtleties. Possesses strong communication skills developed through teaching and tutoring.

EDUCATION

2001 - 2005 Rice University Houston, TX

ABD (Ph.D. Track), Computer Science

- M.S. in Computer Science, 2004, GPA: 3.87 / 4.00
- Visiting Student, Vienna Technical Institute, Summer of 2002 and 2004

1998-2001 Wabash College Crawfordsville, IN

B.A. in Mathematics, minor in Computer Science and Philosophy

- Graduated Summa Cum Laude, GPA: 3.84 / 4.00

GAME/PROJECT EXPERIENCE

2006 - current Javaground USA, Inc. Irvine, CA

Mobile (J2ME) Game Developer/Programmer

- Casino Royale: Developed the cell phone game from scratch and ported to over 600 phones, including international builds (US, Europe, Russia, and South America), against a firm deadline of six months.
- Caterpillar: ported to Cingular, Sprint, T-Mobile, and Nextel.
- Spider-Man 3: ported to Sprint.
- Meet The Robinsons: ported to Cingular, Sprint, T-Mobile, Verizon and Nextel.
- Townsman 3: ported to Cingular, T-Mobile, and Boost
- Currently working on an original development.

2005 - 2006 Archimage, Inc. Houston, TX

Game Programmer

- Worked on two titles using the Torque Engine, including script and engine modification
- Gained experience with many aspects of game programming including camera, GUI, AI, graphics, user input, model manipulation, and more
- Designed many of the mini/puzzle games found in the titles

2001 - 2005

Rice University

Houston, TX

Graduate Student

- Developed a query rewriting system that implements various structural optimizations and evaluates the running times of the rewritten queries
- Programmed a ray-tracer, fractal generator, Lagrange and Bezier curve manipulator, and polygon viewer (including hidden surface removal and shading)
- Developed an automated (self-taught) player for the game of Diplomacy
- Programmed a SAT solver that computes whether a given propositional formula is satisfiable

TEACHING AND COMMUNICATION

2001-2005

Rice University

Houston, TX

- Taught classes in Intermediate Artificial Intelligence, Advanced Database Systems, and Advanced Logic in Computer Science
- Developed and graded projects for Intermediate Computer Graphics, Intermediate Artificial Intelligence, Advanced Database Systems, and Advanced Logic in Computer Science
- Reviewed a paper for ACM Journal of Experimental Algorithmics (JEA).

PUBLICATIONS

- Benjamin McMahan, Patrick Porter, Guoqiang Pan, Moshe Y. Vardi, Projection Pushing Revisited, EDBT, pages 441-458, 2004
- Benjamin McMahan, Structural Heuristics For Query Optimization, Master's Thesis, Rice University, 2004

AWARDS RECEIVED

- Department of Computer Science Corporate Affiliates Meeting Poster Competition, 3rd place, Rice University, 2004
- Loewenstern Fellowship, Rice University, 2001-2002
- Member of the Phi Beta Kappa Academic Honor Society
- George Lewes Mackintosh Fellow, Wabash College, 2001
- George E. Carscallen Prize in Mathematics, Wabash College, 2001
- The Paul Mielke Award, Wabash College, 2001
- The Jeanne C. and W. Dale Compton Scholarship, Wabash College, 2001
- President's Scholarship, Wabash College, 1998-2001
- Wabash Alumni Scholarship, Wabash College, 1998-2001
- Wabash Leadership Award, Wabash College, 1998-2001
- AP Scholar with Distinction, 2001

COMPUTER RELATED SKILLS

- Proficient at Programming in J2ME, C/C++, Latex, SQL.
- Experienced with the Javaground Express, Torque Engine, Pascal, HTML (Javascript and CSS), Lisp, Perl, Java, and source control programs such as Perforce, CVS, and SVN.