Christian Maher

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Work History

Lockheed Martin (August 2012—Present)
Software Engineer Asc.

- Use JavaScript, CSS, C#, and ASP.NET for GUI development of dynamic database-backed web pages
- Optimize speed of web content delivery through testing, profiling, and experimentation
- Propose and develop new features to enhance site usability and improve user experience
- Encourage and assist in adherence to JSLint-compatible coding standards to enhance project maintainability

Applied Research Lab (May 2010—July 2012)
Software Engineer Intern

- Lead project requiring conversion and deployment of existing Java software to the web as an applet with native library distribution and JavaScript interaction
- Managed a MongoDB database for data aggregation and analysis
- Maintained a Tomcat server with the Ozone Widget Framework for testing software integration
- Developed visual analytic software using Java 3D for use in CAVE and other 3D environments

Education

The Pennsylvania State University—University Park (August 2008—May 2012)
B.S. Computer Science, B.S. Mathematics, Japanese Minor — Cumulative GPA: 3.48/4.00
Selected Coursework:

Computer Science: Systems Programming · Operating Systems · Data Structures and Algorithms · Automata · Network Security · Programming Language Concepts · Machine Learning

Mathematics: Multivariable Calculus · Ordinary and Partial Differential Equations · Linear Algebra

Projects and Activities

Flexsym (https://github.com/cmaher/flexsym) *Ruby*

- An automata-based Turing-tarpit programming language for building non-deterministic Turing machines
- Uses rparsec to build a recursive-decent parser for generating the program's abstract syntax tree (AST)
- Interprets the AST in a Ruby-powered runtime environment to process states, stepping through non-deterministic branches in parallel

Bandit (https://github.com/cmaher/bandit) *Ruby*

- Multi-armed bandit framework for Rails; forked from bmuller/bandit
- Provided Softmax algorithm implementation
- Added support for cascading configuration options
- Contributed documentation and tests for developed features

SGAS (https://github.com/cmaher/sgas) *Java*

- A simple game to teach basic principles of game architecture and development
- Used in a Penn State ACM student workshop prior to a game-programming competition
- Decouples the main game engine for reuse by other students

Biscuit (https://github.com/PennState-ACM/PennState-ACM-Biscuit) *C*

- An API for the iRobot Create to simplify programming
- Created code for initialization and buffer communication
- Provided API design guidance

Penn State ACM Student Chapter Vice President (Spring 2011—Spring 2012)

- Hosted a local ACM ICPC-style programming competition
- Prepared members for the official ACM ICPC programming competition
- Presented workshops on tools, technologies, and career development
- Worked to connect students with companies and employment opportunities

Skills

Programming Languages:

C · C++ · C# · Java · JavaScript · CoffeeScript · Ruby · Python · Scala · Haskell · Perl · Lua · PHP

Technologies:

SQL · MongoDB · CSS3 · HTML5 · AJAX · JSON · XML · Ant · .NET · ASP.NET · Android