

## WORK HISTORY

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**Lockheed Martin** (August 2012—Present)

**Software Engineer Asc.**

- Use JavaScript, CSS, C#, and ASP.NET for 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 coding standards to enhance project maintainability
- Introduce and implement behavior-driven-development to ensure project stability
- Provide scripts for automation of common repetitive tasks

**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

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**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

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**Website** (<http://cmaher.github.com>)

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

*Ruby*

- An automata-based Turing-tarbit 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

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**Programming Languages:**

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

**Technologies:**

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