

# Abhishek Madhusudhan

CS GRADUATE STUDENT | SOFTWARE ENGINEER

Email: [amadhusu@gmu.edu](mailto:amadhusu@gmu.edu)

Website: [www.abhimadhu.com](http://www.abhimadhu.com)

Phone: +1 571-340-7888

A software developer with 3 years of professional programming experience. Actively seeking opportunities in areas of Web, AI, Blockchain, Software Security.

## Education

M. S. in Computer Science **Aug 2016 – May 2018**  
George Mason University (GPA: 3.5)

B.E. in Computer Science **Aug 2010 – May 2014**  
Visvesvaraya Tech. University (Bangalore Institute of Tech.)

## Experience

**GMU | Graduate Teaching Assistant** Jan 2017 - Jan 2018

- Teaching Object Oriented Techniques for problem solving and implementation of algorithms using JAVA.

**IBM GBS | Software Engineer** Sep 2014 - Aug 2016

- Worked as an application developer implementing core functionalities.
- Redesigned to remove critical dependency on a middleware application by directly interfacing with it to obtain its service.
- Automated web service calls to reduce faulty data from **10% to 3%**.

## Publication

- Published an article about the research project (**State of the Union**) on "predictiveanalyticsworld.com".

## Certifications

- Oracle Certified Professional JAVA SE 6 Programmer.
- Oracle Certified JAVA EE 6 Application Developer.
- Coursera Android Application Development.

## Awards

- Consecutively awarded "manager's choice" for 2 years and a "deep skill" award for sharing expertise.

## Skills

### Programming & Databases

- |                  |              |             |
|------------------|--------------|-------------|
| • JAVA           | • C          | • SQL       |
| • REST, SOAP WS  | • LISP       | • JDBC      |
| • ActiveVOS, BPM | • Spring MVC | • Hibernate |

### UI, Scripting & Web

- |                  |            |             |
|------------------|------------|-------------|
| • HTML, CSS      | • JSP, JSF | • AWS, EC2, |
| • Javascript ES6 | • JQuery   | S3          |
| • Bootstrap      | • JSON     | • Git       |

## Projects

### Secure Game Web Application

Developed a web based secure multiplayer checkers game defending against some top OWASP vulnerabilities. Utilized Argon2 with salt for password hashing. Prepared assurance case to strengthen the security claim.

### Ripple Cryptocurrency Wallet

Researched Blockchain technologies and developed a web wallet for ripple cryptocurrency.

### State of the Union

Developed a dashboard and implemented a Text-Mining system to obtain political insights from public data.

### Survey Web Application

Developed and deployed Web Application on AWS EC2 to survey by collecting and storing data from the user.

### Portfolio | [www.abhimadhu.com](http://www.abhimadhu.com)

Designed & Developed a personal website using Bootstrap, Google MDL framework. Deployed using Amazon AWS EC2 with routing configurations between Route 65 and Google Domains.

### Tetris AI

Developed an AI using genetic algorithm to evolve a set of heuristic weights maximizing the fitness value and generating a model which will be used to play the game.

### Connect 4 AI

Developed an AI using minmax algorithm to generate a winning move in the game. Also improved performance by using alpha-beta pruning. The AI won against other Connect 4 AI developed in a class competition.

### Neural Net System

Implemented a neural network system using LISP to learn solutions and improve accuracy by providing weights and updating them through forward and back propagation.

### Evolutionary Computation Genetic Algorithm

Implemented an Evolutionary Computation Genetic Algorithm using LISP to find the best solution through various exploration and exploitation mechanism.

### Partial Order Planner

Implemented a brute force planner to resolve 2 & 3 block world problems by creating a complete plan consisting of the start and goal conditions.