

GSoC 2018 Proposal

Organization : AIMA

Implement & Visualize Algorithms

Mentor : Sam Goto

Project : aima-javascript

Personal Details

Name : Kushal Majmundar

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Github

Github : [kUSHAL0601](https://github.com/kUSHAL0601)

Availability

During Summer :

I will be able to dedicate about 50 to 55 hours every week for the project. It being an interesting one will help me put more hours for sure. I plan to start it by 8th May and complete it asap. I would also like to make my codes perfect according to coding

standards and full of comments. I also looked through the design doc formats and will also follow the process. I guarantee to complete my work latest by July end.

Before summer :

I am planning to learn simpler frameworks for animations and see if I could improve currently developed animations to a better level. I am through with the textbook but revising is anyways good. I am also developing projects on web-gl which might be helpful.

Educational Background

I am currently taking my AI course and am doing graphic animations with heavy libraries like opengl and webgl. I have done Software Engineering courses and am aware of various methods of flows which I plan to follow. I have projects in AI like making bots for games like 4x4x4x4 Ultimate Tic-Tac-Toe(available in my repository)

Workflow

I use Kali-Linux and love to use standard vim for most of the purposes. But using good IDE's anyways works right for me.

Interests

I'm interested in the projects : [aima-javascript](#) because I will get to learn a lot from it and it is the best way to apply my skills. And I believe I'll get to learn a lot from this project since the book is a gold-mine for anyone who visualizes algorithms - it's a good opportunity for me to combine AI theory with graphics.

Here's my preference order for chapters that intrigue me the most (as asked) :

1. Chapter 5 - Adversarial search:

As mentioned earlier, I am looking for topics where I can make the best use of graphics and make it as interactive as possible.

2. Chapter 17 - Making complex decisions :

MDP's are always nice to work with. So this will always prove to be a worthy decision :).

3. Chapter 16 - Making simple decisions :

Decision problems are always lovely to work with and I guarantee to complete my work.

4. Chapter 3 - Problem solving by searches :

Searches are the best place to apply animations. I know many of the algorithms have already been implemented but I guess new is always welcomed.

I'd also like to mention that I would be happy to tackle any other chapters that my mentor thinks are important to be done before as well. Part of what makes this project interesting is the fact that each chapter is cool and different; the book in itself has lots of static demos which can be translated into interactive visuals, being a goldmine for programmers who deal with graphics.

I did make a samples in hurry available at

<https://web.iit.ac.in/~kushal.majmundar/bfs.html>

<https://web.iit.ac.in/~kushal.majmundar/valueiteration.html>

And Design doc available at [Design doc](#)