

EDUCATION

Master of Science, Computer Science

University of Southern California, Los Angeles, California

December 2019

Bachelor of Technology, Electronics and Communication Engineering

SRM University, Chennai, Tamil Nadu, India.

July 2013 – June 2017

Undergraduate Visiting Student, Massachusetts Institute of Technology

Massachusetts Institute of Technology, Cambridge, Massachusetts

February 2016 – June 2016

EXPERIENCE

Software Research Intern, MIT Media Lab, Cambridge, Massachusetts

March 2016 – July 2016

- Researched different mechanisms in Game Theory which promote and maintain human cooperation and its relative efficiency in sustaining the cooperation.
- Designed an online experiment where human participants interacted with bots confederates in a 10-round public goods game (PGG).
- Built a dynamic responsive web application to mimic the online experiment. Developed the front end for the application using HTML, CSS, JQuery, Angular and MeteorJS. Set up the backend using MongoDB to store player data.
- Configured the application to work with Amazon Mechanical Turk using MTurk API's to incentivize volunteers to play the online game.

Front End web developer, WebArch, Chennai, India

February 2015 – November 2015

- Conceptualized, planned and executed designs for a wide range of websites for various campus events in a team of front end developers.
- Led a team of front end developers and played an important role in building user interfaces, data visualizations and built overall user experience of several websites.
- Utilized and contributed to style guides and other design documentation to maintain coherent information and interaction design patterns.

PROJECTS

Travel and Entertainment Search Web application

March 2018 – April 2018

Developed a responsive web application which searches for Travel and Entertainment options in and around a particular location. Utilized Google Places API, Google Maps JavaScript API and Yelp API to show search results and place details including place information, photos, reviews. Google Maps API was used to display maps and routes to a chosen destination. Constructed backend server using Node JS and Express JS. Frontend developed using HTML, CSS, JavaScript, Bootstrap, JQuery, AJAX and Angular JS. Added functionality to allow users to store favorite destinations in browsers local storage. Deployed the web application on AWS Elastic Beanstalk

Go Back N UDP

April 2018 – May 2018

Built a reliable Go Back N protocol on top of an unreliable UDP. Used C++ socket programming for client and server programs. Mininet virtual machine was used to mimic a lossy channel. Used sequence and acknowledgment numbers for reliability along with concepts of SYN and FIN bits for connection set up and connection teardown between client and server.

Project Silence

Jan 2017 - June 2017

Project Silence is an attempt at imitating Active Noise Control, a method of achieving noise control electronically using anti – noise signal and its corresponding destructive interference, leveraging neural networks. Active noise cancellation was performed on a noised audio input using an ADALINE (Adaptive Linear Neuron) neural net based adaptive filter with the Windrow-Hoff learning rule using MATLAB.

Minimax Game Playing Agent

Oct 2018 - Nov 2018

Implemented Minimax algorithm in Python and improved its running time with Dynamic Programming for a resource optimization problem. Given an applicant pool and preference list for each applicant, the algorithm was able to efficiently choose applicants to maximally utilize the limited resources of a homeless shelter.

Web Search Engine for New York Post Website

Sept 2018 - Nov 2018

Set up a search engine using Apache Solr and Lucene to return the most relevant pages for a query using PageRank algorithm to rank results. Built an inverted index of web pages using a Map-Reduce program in Hadoop and configured Solr for autocomplete and spell correction.

TECHNICAL SKILLS

Languages - Java, C++, Python. | **Web Technologies & Frameworks** – HTML, CSS, JavaScript, Bootstrap, JQuery, Angular JS, Node JS, MeteorJS, ExpressJS, JSON, PHP, XML, Flask, Hadoop, MapReduce, AWS, Apache Solr | **Mobile** – Android | **IDE** – NetBeans, Eclipse, BlueJ, IntelliJ, PyCharm | **Databases** – MySQL, MongoDB | **Operating Systems** – Windows, Linux | **Version Control** – Git

PUBLICATION

Active Noise Cancellation for Audio Signals using Neural Net based Adaptive Filters, published in International Conference on Signal Processing, Informatics, Communication and Energy Systems (IEEE SPICES 2017).