Vijay Mahantesh S M

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Objective

Under graduate student seeking to build on strong research skills. Eventually have growth in academic career where I can utilize my skills and training.

Research Interests

Artifiical Inteligence, Machine Leanring, Complex Networks, Computer Vision, Multiple View Geometry(Stereo Vision), 3D reconstruction, Approximation Algorithms

Education and Academic Perfomance

10th Grade (SSLC), Marimallapa High School, Mysore, Karnataka, India	Overall : 94%	2006-2007
12th Grade (2nd PU), Sadvidya Composite Pre-University College, Mysore, Karnataka, India	Overall : 86.33% PCM : 96% CET rank : 710	2007-2009
4th year student, Bachelor of Engineering in Computer Science and Engineering People's Education Society Institute of Technology, autonomous under Visvesvaraya Technological University, Belgaum Bangalore, Karnataka, India	CGPA : 8.00/10.00	2009-2013

Projects and Internships

Tic Tac Toe

First academic minor project of building a never losing game. This was an attempt to design computer games with AI using C language.
- Crucible Of Research and Innovation (CORI) Lab
- Duration : August-December 2010

Boredom Detection in Class

This Computer Vision project is about measuring how captivating the lecture is. It utilizes the images captured during the lecture and quantizes the boredom level by computing the amount of disturbance during the lecture.
- Tools used python, OpenCV, Python Imaging Library
- Guided by Dr. Sudarshan Iyengar
- Indian Intitute Science, Bengaluru
- Duration : January-April 2011

Approximate All Pair Shortest Path in a Network

This novel algorithm aims to provide an alternate approach to finding the shortest path between all pairs of nodes in a network. The algorithm primarily comprises of two phases. It uses the basic concepts of reinforcement learning in the first phase to build a lookup table. The second phase uses the lookup table in order to navigate on the graph. I have co-authored the research paper on this algorithm.
- Guided by Dr. Sudarshan Iyengar
- Research Internship in CSE dept of Indian Institute Technology, Madras
- Duration : June-August 2011

Prediction of Arrival of Nodes in a Scale Free Network	In the network which is assumed to have progressively evolved over time. Given a completely evolved network, our algorithm deduces the probabilistic order in which the nodes might have arrived during the formation of the network. It is equivalent to tracing the history of evolution of the network. It involves training the algorithm with many syntetic networks. I have co-authored the research paper on this algorithm. - Guided by Dr. Sudarshan Iyengar - Research Internship in CSE dept of Indian Institute Technology, Madras - Duration : June-August 2011
Twitter Network Visualisation	Complex Network mini project involving the real time visualization of followers network. - Tools used Python, networkx, tweepy and visualization tool yED (yWorks) etc. - Demonstrated this project in *Prakalpa* the annual event of projects held in our institution PESIT.
Parallel Bidirectional Search Algorithm in Power Law Networks	Parallel algorithm to find approximate path between two nodes in scale free network, executed at both source and destination. This utilizes the nature of power law networks. - Guided by Dr. Sudarshan Iyengar - Duration : January-May 2012
Integrating Stereo Vision in SimpleCV	Implementation of Stereo Vision in SimpleCV (Open Source Computer Vision Library used for providing rapid deployment environment). Stereo Vision is a way of getting depth(3D) information of a scene from two or more 2D Images. - *Google Summer of Code-2012* project - Mentor : Katherine Scott - Mentoring Organisation : SimpleCV - Duration : June-August 2012.
A Novel Recommendation Algorithm Using Graphs	A generalised algorithm designed to apply content based and collaborative filtering technique to recommend items to the users. Machine Learning techniques got from user training data are applied on the graph (built by item dataset). This project is currently in progress. - Guide : Pallavi Karanth - Duration : September - Till date 2012.

Research and Publications

- "A Navigation Algorithm Inspired by Human Navigation", arXiv:1111.4898v1 [cs.SI], has been accepted as a "Poster Paper" in The IEEE/ACM International Conference on Social Networks Analysis and Mining (ASONAM 2012), to be held from August 26th to 29th in Istanbul,Turkey.
- "Prediction Of Arrival Of Nodes In A Scale Free Network",arXiv:1111.4886v2 [cs.SI], has been accepted as a "Short Paper" in The IEEE/ACM International Conference on Social Networks Analysis and Mining (ASONAM 2012), to be held from August 26th to 29th in Istanbul,Turkey.

Technical Skills

Operating Systems	Linux and Windows
Programming Languages	C, C++, Java, Python
Databases	Basics of MySQL, MongoDB
Web Technologies	HTML, CSS, JavaScript
Development Environments	GEdit, Eclipse, Code Blocks, Netbeans, ViM, Notepad++, JGrasp, iPython
Version Control	Git, SVN
Text Formatting	LaTeX

Academic Honors and Accomplishments

- I've delivered a talk on Graph Navigation Techniques at IIT-Chennai during July 2011
- Academic Excellence Award from Marimallapa high school and Sadvidya PU college in 2009
- Technical education scholarship from BSNL
- I've got Distinction Awards in 5 semesters of Bachelors of engineering
- Student member(Member ID : 6174112) of Association for Computing Machinery

Interests and Hobbies

Teaching	I have always loved sharing my knowledge. I volunteered as an instructor for Student Internet World under National Digital Literacy mission. In these training sessions we taught kids from a local government school about the advantages of the Internet and the ways to use it judiciously. I've also conducted "PyMonth" featuring talks on Python and related libraries in my college.
Active member	I've always been an open source enthusiast and core member of PES Open Source Group since its creation. Ive organized various talks on OpenSource tools at college. I also handle python training sessions in college.
Event organisation	I've been an active and core member of PES Open Source Group. As a group we have ogranised Ayana a two-day event technical event involving talks by leading Open-Source contributors and 24-hour hackathon.
Technical Blogging	I've blogged my past works realted to GSoC (Google Summer of Code) and research work. Link : https://genericpointer.tumblr.com
Sports	I was a district level basketball player in my high school days. Habitual table tennis player