Pratham Makhni Alag

2700 Hearst Avenue SPC 2292, RM FH6-614A Hillside (510) 926-7568
Berkeley, California 94720 United States prathamalag@berkeley.edu

Education

University of California, Berkeley, CA September 2013 - May 2017
BS, Electrical Engineering and Computer Sciences, Technical GPA: 3.62, Overall GPA: 3.53
Regents' and Chancellor's Scholar as an International: This is the most prestigious scholarship awarded by the University of California, Berkeley, to entering undergraduates and is offered to the top 2% of the incoming class.

Experience

EMC Corporation June 2014 - August 2014
Summer Software Engineering Intern
Created a Ruby on Rails App for system engineers working at EMC, to keep record of their activities and to award them with various achievements as they climb up the leaderboards by taking up offers presented. Also, the app is the management's way of offering SEs incentives to work on offers/projects they need completed. Currently deployed on: segamesapp.herokuapp.com with Postgres databases.

Research with Carlo H. Séquin: Professor, CS Division, EECS Dept., U.C. Berkeley September 2014 - Present
Undergraduate Student Researcher
Used advanced sweep constructs to model mathematical knots and transform their geometry into attractive sculptures. Working on developing an algorithm to apply 3D transformations to whole knots, such as tightening integrated with real-time graphics display.

Winning hack at HackMIT: Backito Ethereum October 4-5, 2014
Won Best Cryptocurrency Hack and Best Assembly Hack for our project, Backito
Backito uses Ethereum, "Bitcoin 2.0" to fund user campaigns and is 100% decentralized: the ether is released only if one or more of the parameters of a contract are met. Wrote binding decentralized contract makers for ether currency and made the ruby on rails app.

Skills

Programming:
Extensive experience with Ruby, C++, C, Python, Java, JavaScript, Scheme, Assembly, SQL, HTML and CSS.
Frameworks/Software/Database:
Ruby on Rails, Git, Bootstrap, PostgreSQL, MySQL, Node.js, Sublime Text 2, Eclipse, BlueJ, CAD software and Emacs.

Projects and Papers

- Worked with an Indian Startup, Red Carpets to design a customer loyalty system that enhances user experience and gives users incentives to return to local businesses: redcarpetup.com (I worked with Ruby on Rails). (Summer, 2014)
- Worked on a Web Designing project with Non-Profit Organization (BADA: Burmese American Democratic Alliance) for Code the Change, Berkeley. (Spring, 2014); Working on my personal website: prathamalag.com
- CS61A Class Projects: Hog, Ants, Scheme: https://github.com/prathamalag1994. Built a Twitter Trends analyzer as well.
- CS61B Class Projects: Built an image modifier and an efficient graph search mechanism.
- Authored an Astrophysics-based research paper, accredited by S.P.A.C.E. on the topic, "Whether a Soyuz Spacecraft really needs a parachute or is there an alternative?"-This paper was accepted in the International Journal of Scientific and Engineering Research (IJSER) and was published in the same in January 2013: Volume 4, Edition 1.

Leadership

Lab Assistant for CS 61B with Prof. Paul Hilfinger Fall 2014
Data Structures is an essential class, in which I explained concepts and solved students' doubts in labs regarding course material.

Code The Change, Berkeley Chapter January 2014 - Present
Project Manager and Web Developer
Code the Change focuses on forming project teams to assist non-profits through web development and design. In this project, we developed the internal dashboard for GoodLabs, to help them conduct statistical analysis for non-profits and merchants.

Coursework

CS 61C - Great Ideas in Computer Architecture, C; CS 61B - Data Stuctures, Java; CS 61A - Python, Scheme; Math 54; CS98; UGIS 192; Math 53; Math 1B; Math 1A; Physics 7B; Physics 7A; Math 24; ME 24; E98.

High School: Delhi Public School, R.K.Puram, New Delhi, India

- Grade 12 Percentage: 92.6%; Grade 10 CGPA: 10. Prantik Roy Memorial Award Recipient for securing First Position in Grade 10.
- Gold medalist for academic excellence for seven consecutive years. (2005-2012)
- Gold medalist for distinctive extracurricular performance at an international level: Discovered the Main Belt Asteroid 2012 PC6; awarded by the International Astronomical Search Collaboration (IASC) and SPACE for making a Provisional Discovery, a Preliminary Discovery of the Asteroid AVK0039 and 13 NEO Observations in the All India Asteroid Search Campaign (AIASC) 2012, thereby helping in correcting the paths of observed celestial bodies in the NASA MPC.
- President of the Astronomy Club and member of Astronomica: Organized the Venus Transit Observatory at Jantar Mantar, New Delhi. Founder of the Rocket Science Club, Member of the Aerospace Society, Editor in the Editorial Board and Member of the Debating Society as well as the Theatre Club.