RITWIK DUTTA

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OBJECTIVE

To develop my computer science skills in an environment that challenges me and facilitates further learning.

EDUCATION

Archbishop Mitty High School	2012 - 2016
Stratford Middle School	2009 - 2012
Millikin Elementary School	2003 - 2009

SKILLS

Programming   Python, C/C++,Java, Linux CLI
6 years of experience with data structures and algorithms

Web Development   HTML, CSS, JavaScript, PyMongo
4 years of experience with creating websites either from scratch or using various online technologies and frameworks (*e.g.*, HTML5, CSS3, jQuery, Bootstrap, WordPress, MongoDB, PyMongo)

Graphics   Adobe PhotoShop, Inkscape
4 years of experience in creating images or logos for various projects

Video/Audio Editing   Adobe After Effects, Audacity
4 years of experience in creating short films, gaming videos , and background audio

IDEs/VC   Visual Studio, IntelliJ, Git
5 years of experience in writing code, managing files, and general project for various programming applications and projects

Editors   Vim, SublimeText, VS Code
5 years of experience in writing code for various programming applications and projects

TEAMS & LEADERSHIPS

Computer Science Club   12th Grade
Served as President of the Computer Science Club

Computer Science Club   11th, 10th, and 9th Grade
Lead officer working with peers on solutions to previous Stanford ProCo problems and taught others about topics in computer science

Robotics Camp   11th, 10th, and 9th Grade
Mentored younger children (from 4th to 8th grade) on creating simple robots and teaching them simple engineering concepts

Team Munster   11th Grade
Served as team captain and in-game-leader for the Team Munster Counter-Strike lineup to create strategies and coordinate positions with teammates

Robotics Team   9th Grade
Worked with peers on the 2013 FRC competition Ultimate Ascent to design and program an autonomous and teleoperated robot and represented school at Sacramento Valley Regional competition

Science Team   8th Grade
Represented school in the National US Department of Energy Science Bowl as physics and math question specialist

UNIVERSITY PROJECTS

Carnegie Mellon University   Summer 2015
Working with Prof. R. Marculescu in the Department of Electrical and Computer engineering at CMU in the area of networking and big-data analysis.

Georgia Institute of Technology   Summer 2014
Worked with Prof. M. Wolfe in the Department of Computing at Georgia Tech to create a free and open-source end-to-end software system for monitoring long-term-care patients in smart homes ([Project Homepage](#)).

PUBLICATIONS

Ritwik Dutta and Marilyn Wolf, *"An Extensible Software Infrastructure for Computer Aided Custom Monitoring of Patients in Smart Homes,"* *International Conference on Systems and Software Engineering (ICSSE)*, Miami, USA, March 9-10, 2015. | Paper | Slides   [Extended version submitted to IEEE Transactions on Software Engineering]

PERSONAL PROJECTS

Select set below. Full list available on my GitHub profile.

Max Keyboard Configurator   Personal   Summer 2014
Paid project for Max Keyboards to develop a web-based utility for creating customized keyboard designs with a variety of different layouts (Max Keyboard)

K.A.R.E   Personal   Spring 2014
Created a GitHub recommendation engine by using the GitHub API to fetch data about user "starring" to generate good-quality results (K.A.R.E)

Password Manager   Personal   Spring 2014
Wrote a GUI-based password manager in pure Python using 256-bit AES encryption with a WxWidgets frontend (SecureWallet)

Display Latency Testing   NVIDIA   Summer 2012
Used photoelectric sensors and HDMI signal equipment to test response time on various LCD TVs in various display modes (cinema mode, vivid mode, and gaming mode)

3D Anaglyph Generation   School   Fall 2010
Shot 2D images at varying horizontal separations, combining them into 3D anaglyphs, and using the ITU.BT 500 image quality scale to deduce the optimal distance (2.5") for human viewing (project writeup)

INTERESTS

Pop-punk bands, Comedy movies, Sci-Fi books
Counter-Strike, FPS games
Guitar, Biking, Swimming, Karate