Jonathan Castello

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EDUCATION

CSU: NORTHRIDGE
BS in Computer Science & Pure Mathematics
May 2016 | Northridge, CA
Cumulative GPA: 3.96
Dean's list (All Semesters)
Outstanding Graduating Senior

UC: DAVIS
Ph.D. in Computer Science
Advisor: Dr. Aditya Thakur
Projected for 2022 | Davis, CA

SOCIAL

GitHub: **Twisol**
Twitter: **@Twisol**

COURSEWORK

UNDERGRADUATE
Operating Systems
Computer Graphics
Embedded Systems
Abstract Algebra I & II

GRADUATE
Concurrent Programming
Programming Languages
Program Analysis & Automated Reasoning

SKILLS

PROGRAMMING
Proficient with:
Python • Ruby • HTML • CSS • JavaScript • Lua • C/C++ • Java
Familiar with:
Haskell • Rust

WORK EXPERIENCE

JET PROPULSION LABORATORY | Software Development Intern
June 2012 - August 2016 | Pasadena, CA
- Developed and maintained ground tools for Cassini sequence planning
- Designed and implemented software for the Cassini non-science data archive
- Mentored and coordinated a team of interns during Summer 2014
- Languages used include Python, Ruby, Haskell, C, and Java

CASTELLO CITIES INTERNET NETWORK, INC. | Chief Information Officer
2006 - Present | Moorpark, CA
- Manage and maintain a fleet of Linux web servers
- Process external Excel records for import into company databases
- Handle exigent situations on-call

ACADEMIC EXPERIENCE

CSUNSAT1 - CUBESAT PROJECT | Software Developer
May 2014 - Septemper 2017 | Northridge, CA
Participated in CSUN's academic CubeSat project, "CSUNSAT1"
- Developed and contributed to the design of CSUNSAT1
- Developed UART and SPI drivers for the dsPIC33F microchip
- Designed a streaming mode for satellite commands with large amounts of data

TUFTS UNIVERSITY | Undergraduate Researcher
Summer 2015 | Boston, MA
- Worked with **Dr. Csaba Tóth** on the "Sliding Cameras" problem in computational geometry.
- Enabled the group to generate instances of the problem and explore the problem space by developing a visualization tool in JavaScript: http://jonathan.com/math/artgalleries/

OPEN-SOURCE PROJECTS

ANACHRONISM | Telnet Protocol Implementation
https://github.com/Twisol/anachronism
An RFC-{854, 855}-compliant implementation of the Telnet protocol. A pluggable telopt API allows users to include and enable only the options they require. An event-based streaming model allows for dynamic reinterpretation of the data stream (e.g. inserting a (de)compression layer on-demand).

LUPIN | Lua Language Implementation
https://github.com/Twisol/lupin
An experimental implementation of Lua on the Rubinius virtual machine.

WEBGL-FRACTALS | WebGL Fractal Viewer
http://jonathan.com/math/fractals
https://github.com/Twisol/webgl-fractals
A Newton fractal viewer written in JavaScript and GLSL. Supports configuration of many fractal parameters, including precise positioning of polynomial roots with complex exponents.

PUBLICATIONS

Castello, Jonathan. "Character Development Through Trait Psychology." Wings: Distinguished Student Essays. 19th ed. Hayden Mcneil, 2013. 62-65. Print.

AWARDS

2012   Recipient of the *Pradip and Rekha Choksi Endowed Scholarship*
2016   Named the *Outstanding Graduating Senior* of the College of Engineering and Computer Science at CSUN
2016   Nominated for the *Wolfson Scholar Award* by two separate Colleges within CSUN