

Jonathan Castello

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EDUCATION

CSU: NORTHRIDGE

BS IN COMPUTER SCIENCE

& PURE MATHEMATICS

Expected May 2016 | Northridge, CA

Campus GPA: 3.95

Dean's list (All Semesters)

LINKS

GitHub:// [Twisol](#)

Twitter:// [@Twisol](#)

COURSEWORK

UNDERGRADUATE

Operating Systems

Programming Languages

Computer Graphics

Embedded Systems

Abstract Algebra I & II

SKILLS

PROGRAMMING

Proficient with:

Python • Ruby • HTML/CSS/JavaScript •

Lua • C/C++ • Java • PHP

Familiar with:

Haskell • Rust

Special experience:

Software architecture • Defensive programming

EXPERIENCE

JET PROPULSION LABORATORY | SOFTWARE DEVELOPMENT INTERN

June 2012 - Present | 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

CSUNSAT1 - CUBESAT PROJECT | SOFTWARE DEVELOPER

May 2014 - May 2015 | 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

RESEARCH

TUFTS UNIVERSITY | UNDERGRADUATE RESEARCHER

Summer 2015 | Boston, MA

- Worked with **Dr. Csaba Tóth** on the "Sliding Cameras" problem in computational geometry.
- Enabled the team to generate instance of the problem and explore the problem space by developing a visualization tool in JavaScript:
<http://beta.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

<https://github.com/Twisol/webgl-fractals>

A Newton fractal viewer written in JavaScript and GLSL, using native platform integration with NW.js. Supports configurations of many fractal parameters, including precise placement of polynomial roots.

AWARDS

2012 Recipient of the *Pradip and Rekha Choksi Endowed Scholarship*