

Derek Maciel

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Education

Rutgers University

New Brunswick, NJ

B.S. IN COMPUTER SCIENCE

Fall 2018 (expected)

- Courses: Computer Architecture, Systems Programming, Operating System Design
- Fall 2016 Mentor in the Rutgers USACS Computer Science Mentorship program

Experience

Open System Solutions at Rutgers University

Piscataway, NJ

STUDENT SYSTEMS PROGRAMMER

Jan. 2016 - Present

- Led a team of four to redesign and implement new key features in Go: The Rutgers URL Shortener
 - Organized meetings to brainstorm and triage new features and delegate tasks.
 - Helped design and implement a RESTful API using Flask-RESTful to interact with a new AngularJS front-end
 - Rewrote legacy MongoDB abstraction layer to use the popular Python MongoDB ODM MongoEngine
 - Extended our so-called "all or nothing" user permission system to add additional permission levels
- Improved onboarding and training documentation for new employees
- Fixed critical bugs and added CSV exporting to a employee hours-tracking web app in Python using Flask and MySQL
- Developed a command-line app in Python using rsync to improve the Rutgers University Linux distribution mirrors
- Configured and maintained CentOS Linux and Solaris servers with Salt and Cobbler
- Utilized and extended open source software such as Koji and Mock to automate building RPM software packages

Skills

Languages Python, C, Java, JavaScript, Bash Shell Scripting, HTML/CSS

Tools/Frameworks Linux, Git, Flask, Salt, MongoDB, MySQL, Node.js, Phabricator

Projects

Strawberry Bot

Personal Project

GITHUB.COM/DERE/STRAWBERRYBOT

- Music-playing bot for the voice chat program Discord, written in JavaScript using Node.js, deployed on Debian Linux
- Uses the Discord API and youtube-dl to accept YouTube song requests and stream them into the voice channel
- Plugin system allows functionality to be selectively disabled and allows users to extend the bot for other functions

Salt

Open Source Contributor

GITHUB.COM/SALTSTACK/SALT

- Reported and fixed a High Priority bug with RPM package installation (Pull Request #35119).