Andrei Tumbar

Contact

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Programming Languages

C, Python, Cython, Java, C++ JavaScript, CSS, HTML, Typescript AJAX, LaTeX

Technologies

Linux, cgroups, namespacing, socket, SSL, SSH, libarchive, PostgreSQL, Django, Google API, Amazon AWS EC2, Material Design

Experience

2018-2019 **Cornell University** Ithaca, New York

Programmer

Two summers working to implement statistical models in Mathematica and Python. Wrote front end to statistical modeling algorithms for research.

Education

2019–now **BS** in Computer Engineering (3.91 GPA)

- **Computer Science II**
- **Digital System Design I**
- **Calculus I-IV, Uni-Phys I-II**
- **Discrete Math & Linear Algebra**
- **Circuits I**

Rochester Institute of Technology

2015–2019 **Diploma** Ithaca High School (3.6 GPA) IHS

Projects

2014-now **AutoGentoo** github.com

A scalable Linux environment manager for creating optimized Gentoo Linux environments. Designed to bring higher performance to any platform at low maintenance cost.

Technologies:

- C-level socket TCP/IP with TLS layer (OpenSSL)
- Linux Namespace and cgroups API for Linux environment isolation.
- Django web-application front-end, **autogentoo.org** (rudimentary phase)
- FOSS implementation, **https://github.com/AutoGentoo/AutoGentoo**

2019-now **CPortage** github.com

A highly optimized rewrite of the Gentoo package manager. Written in C, CPortage is able to complete I/O, the most taxing phase of a package manager's calculations in less then a tenth of a second. Gentoo's custom language standards (ebuild) was rewritten in the Bison/Flex grammar parser.

Jun-2019 **Raspberry Pi Quadcopter** Ithaca High School

3D printed quad-copter with a Raspberry Pi control. Implemented PID control for stabilization. Able to reach up to 7 kHz frequency of PID control (limited by I_2C baud rate).

Achievements

Technology Bowl 1st place 2018 TSA national competition – Atlanta Georgia

Technology Student Association team competition where 3 students compete against others across the country to test their knowledge across multiple STEM subjects (Computer Science, Biology, Chemistry, Physics, Engineering)

Website Design 5th place 2018 TSA national competition – Atlanta Georgia

Team competition to develop a website on a given prompt as well as a second one promoting the team's chapter. Team consisted of two content writers, a graphic designer, and a programmer (me).

Engineering Dean's List Rochester Institute of Technology
Maintained a GPA of **3.5** or higher.

Interests

Linux and Open-Source
Love open-source and its development. Linux, being free, open-source and very customizable, has become a hobby of mine.

C
Advanced use of C and many of the POSIX technologies. Wrote networking, thread schedulers, grammar parsers, advanced data structures, tree recursion and more.

Python
Python is a great tool for writing I/O scripts and complex string parsers. Also works well for front-end GUI design.

Skills

Time Management skills
Able to keep up an 18 credit semester and have time to work on personal projects.

Programming Ability
Advanced programming skills in C and Python. Profficient in Java and C++

Quick Learning Capability
Able to learn new APIs and programming languages with ease.