

Andrei Tumbar

Contact

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Programming Languages

C, Python, Cython,
Java, C++ JavaScript,
CSS, HTML, Typescript
AJAX, L^AT_EX

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 (3.92 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](https://github.com/AutoGentoo/AutoGentoo) (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 than 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).

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.