

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, libarchive,
PostgreSQL, Django,
Google API, Amazon
AWS EC2,
Material Design

Work 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 (letter of recommendation available upon request).
- Jun-2019 **Treman State Park** Ithaca, New York
Maintainance
Maintained state park facilities. Work included cleaning bathrooms, planting trees, clearing trails, and general maintenance. Worked independently for the majority of the day while also in charge of one other worker.
- Jun-2018 **Ithaca Streets and Facilities** Ithaca, New York
Building maintainance assistant
Assisted with basic heating, plumbing, A/C, fire alarm and fire sprinkler systems. Assisted with limited electrical, carpentry, etc.

Education

- 2019–now **BS candidate** in Computer Engineering (3.91 GPA) – May 2023
Rochester Institute of Technology
- **Computer Science II**
 - **Digital System Design I**
 - **Calculus I-IV, Uni-Phys I-II**
 - **Discrete Math & Linear Algebra**
 - **Circuits I**
- 2015–2019 **Diploma** Ithaca High School 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.

General 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. Around 3+ years of experience.

Python

Python is a great tool for writing I/O scripts and complex string parsers. Also works well for front-end GUI design. Around 6+ years of experience.

Skills

Time Management skills

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

Programming Ability

Advanced programming skills in C and Python. Proficient in Java and C++.

Quick Learning Capability

Able to learn new APIs and programming languages with ease.

Teamwork Skills

Competed in Engineering and Computer Science competitions at the national level very successfully in multiple teams.