Tyler Friedman

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SUMMARY

Highly analytical and motivated information technology professional with demonstrated expertise in web development, research and analysis, and software engineering. Works well independently and collaboratively. Resourceful, and dedicated to continued professional growth.

PORTFOLIO

- Personal website: https://tyfried.github.io
- GitHub: https://github.com/tyfried
- Idealogs: https://www.idealogs.org, code is hosted at https://github.com/tyfried/idealogs, more info at https://tyfried.github.io/portfolio/idealogs

SKILLS

Web Frameworks: Django
Languages: Python, C++, MATLAB, Erlang, HTML, CSS, jQuery, LaTeX
Applications: Git, Vagrant, DigitalOcean, Elasticsearch, PostgreSQL, PDB, memcached, Celery, RabbitMQ, nginx, gunicorn, borg

RELEVANT WORK EXPERIENCE

Idealogical Foundation, Inc., Flagstaff, AZ
Founder, Lead Developer *2018 – Present*

- Built a crowdsourcing website (Idealogs®) from scratch in Django
- Mastered fundamentals of full-stack web development including: M-V-T architecture, ORMs, rapid prototyping, responsive design, search, caching, asynchronous task management, VPS hosting, deduplicating backups, and profiling
- Developed idea from infancy to production without prior web development experience or outside help
- Invented a new model for summarizing online discussions
- Managed all aspects of the project including: engineering, financing, nonprofit formation, and trademark application

Major Design Project, Ann Arbor, MI
Computer Video Game Design *2015*

- Built a multiplayer, cooperative video game in Unity using C#
- Utilized agile and scrum software development practices to rapidly prototype new designs
- Prioritized tasks to avoid feature creep

EDUCATION

Technion – Israel Institute of Technology, Haifa, Israel *2016 – 2017*
Completed 4 credits towards a Master of Science in Electrical Engineering *GPA: 94.5/100*
Graduate Student Scholarship (100% tuition waiver and living stipend)

University of Michigan, Ann Arbor, MI *2010 – 2015*
Bachelor of Science with Distinction, Computer Science and Mathematical Sciences *GPA: 3.72/4.00*

RELEVANT COURSEWORK

Programming & Data Structures, Computer Game Design, Databases, Algorithms, Coding Theory, Operating Systems, Computer Security, Distributed Functional Programming, Intro to Combinatorics, Probability Theory

REPORTS

Tyler Friedman. (2015). *Exploring Bounds and Lexicodes*. Produced as part of coursework for MATH 567, Intro to Coding Theory, at the University of Michigan. Available at https://tyfried.github.io/reports/bounds.

Tyler Friedman, Alejandro Uribe. (2012). *Towards a Szego Limit Theorem for Berezin-Toeplitz Operators with Singular Symbols*. Produced as part of an REU at the University of Michigan. Available at https://tyfried.github.io/reports/szego.

RESEARCH EXPERIENCE

Department of Computer Science, Ann Arbor, MI
*Undergraduate Research Assistant (Advisor: **Igor Markov**)* *2014*

- Competed in the 2014 International Symposium on Physical Design's Detailed-Routing-Driven Placement Contest
- Designed and implemented various approaches to an open problem in integrated circuit design
- Troubleshooted bugs of a foreign 1,000,000-line program with little to no documentation provided
- Placed 7th out of 18 teams from around the world

Department of Radiology Computer-Aided Detection Lab, Ann Arbor, MI
*Undergraduate Research Assistant (Advisor: **Chuan Zhou**)* *2013*

- Implemented Prim's algorithm in C and adapted it to help detect pulmonary embolisms in undirected graphs derived from CT scans
- Generated 2D and 3D representations of human arterial trees in MATLAB to improve analysis of minimum spanning tree data

Department of Mathematics, Ann Arbor, MI
*Undergraduate Research Assistant (Advisor: **Alejandro Uribe**)* *2012*

- Studied the spectrum of self-adjoint Toeplitz matrices as a part of a Research Experience for Undergraduates (REU) program, funded by the National Science Foundation
- Developed a solution in MATLAB, and analyzed and demonstrated results in an academic report using LaTeX
- Presented results to a committee of peers in a short talk

ADDITIONAL WORK EXPERIENCE

Coconino Community College, Flagstaff, AZ
Adjunct Lecturer, Mathematics *2018 – 2019*

- Taught semester-long algebra courses to students that struggle considerably with the subject
- Devised lectures with focus on emotional aspects of learning to make courses approachable
- Brought positive energy and humor to lectures to keep students engaged
- Emphasized strong studying habits and pushed students to make connections between time investment and achievement

Transcaucasian Trail Association, Svaneti, Republic of Georgia *Summers 2017 & 2018*
Project Manager (Summer 2018)

- Provided logistical support to project attempting to connect Black and Caspian Seas via one long-distance hiking trail through the Caucasus Mountains (transcaucasiantrail.org)
- Stewarded the project home base and operations center to keep project running efficiently
- Organized food and gear shopping, and managed crews when they were not in the field

Crew Leader (Summer 2017)

- Designed and constructed reroutes of deteriorating hiking trails
- Supervised crews of 8-12 international volunteers on 8-day projects in a backcountry environment
- Managed diverse personalities from varied ages and backgrounds into cohesive working units
- Constantly monitored health, energy, and morale of group to ensure a safe and productive working environment
- Enforced safety-first practices at all times to maintain integrity of the project