Tyler Friedman

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INTERESTS

Social Computing, Computer-Mediated Discourse, Peer Production, Collaborative Sensemaking

EDUCATION

Technion – Israel Institute of Technology, Haifa, Israel *Oct 2016 – Mar 2017*
Completed 4 credits towards a Master of Science in Electrical Engineering *GPA: 94.5/100*

University of Michigan, Ann Arbor, MI *Sep 2010 – Apr 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 MATH 567, Intro to Coding Theory. 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 University of Michigan REU in Mathematics. Available at https://tyfried.github.io/reports/szego.

RESEARCH EXPERIENCE

Department of Computer Science, Ann Arbor, MI
Undergraduate Researcher *January 2014 – July 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 Researcher *Jun 2013 – Aug 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 Researcher *Apr 2012 – Jun 2012*

- Studied the spectrum of self-adjoint Toeplitz matrices as a part of the Research Experience for Undergraduates 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

WORK EXPERIENCE

Idealogical Foundation, Inc., Flagstaff, AZ
Founder, Lead Developer *Dec 2017 – Present*

- Founded nonprofit organization with mission of creating a trusted, neutral social computing platform for understanding complex, controversial topics using community collaboration
- Adapted a powerful open source tool of instantaneous, open collaboration towards a novel framework for accumulating and processing knowledge of a dedicated community
- Fostered idea from infancy to working prototype (www.sunesiary.org) without prior web development experience using the Django web framework

- Designed solutions for the front-end, back-end, deployment, and hosting using limited financial resources

Coconino Community College, Flagstaff, AZ
Mathematics Faculty *Jan 2018 – Present*
- Taught algebra to classes composed primarily of students who 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 academic achievement

FLG Math Tutoring, Flagstaff, AZ
Founder, Mathematics Tutor *Jan 2018 – Present*
- Founded a K-12 math tutoring business
- Tutored local students in algebra, geometry, and statistics
- Created website (flgmathtutor.net) to spread awareness, utilizing online PPC advertising as well as flyer distribution to generate clients

Transcaucasian Trail Association, Svaneti, Republic of Georgia
Project Manager *June 2018 – September 2018*
- 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
- Provided other logistical support for project as necessary

Crew Leader *June 2017 – September 2017*
- Designed and constructed reroutes of deteriorating hiking trails in the Republic of Georgia's Caucasus Mountains
- Supervised crews of 8-12 international volunteers on 8-day projects in a backcountry environment
- Enforced safety-first practices at all times to maintain integrity of the project
- 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

American Conservation Experience, Flagstaff, AZ
Conservation Corps Crew Member *September 2015 – May 2016*
- Built and maintained hiking trails in national parks, monuments, and wilderness areas throughout the southwest
- Learned how to construct durable, long-lasting hiking trails using techniques that minimize environmental impact
- Consistently provided a positive impact on group morale in both pleasant and arduous working conditions
- Avoided injuries to myself and coworkers around dangerous equipment by utilizing effective communication
- Promoted to *Assistant Crew Leader* position during final month of service; managed group dynamics, delegated tasks to maximize group efficiency, and provided guidance and assistance to fellow crew members

Major Design Project, Ann Arbor, MI
Computer Video Game Design *Jan 2015 – Apr 2015*
- Built a multiplayer, cooperative video game in Unity using C#
- Utilized agile and scrum software development practices to rapidly prototype new designs
- Prioritized project features effectively to avoid feature creep

Outdoor Adventures, Ann Arbor, MI
Trip Leader and Trip Coordinator *September 2014 – May 2015*
- Led groups of eight to fifteen participants on multi-day backpacking trips
- Created customized budgets for trip food, gear, travel, and accommodations
- Maintained safety of participants at all times by adapting itineraries to avoid unexpected hazardous situations
- Encouraged positive attitudes within groups by making trips accessible to participants' various skill levels
- Worked actively to engage all participants through the duration of the trip

HONORS/AWARDS
Technion Graduate Student Scholarship *September 2016 – April 2017*
University Honors *Fall 2010, Winter 2011, Fall 2011*

SKILLS
Platforms: MacOS, UNIX
Web Frameworks: Django
Languages: Python, C/C++, C#, MATLAB, Erlang, SQL, HTML, CSS, JavaScript, LaTeX
Applications: Git, GDB, Gprof, PythonAnywhere, AWS, Unity, MySQL