ALISA LEVIN

Email: alisa.levin@trincoll.edu | **LinkedIn:** linkedin.com/in/alisa-levin | **Personal Website:** alisalevin.github.io

EDUCATION

Trinity College, Hartford, CT — Expected May 2021
Bachelor of Science in Computer Science, Minor: Models and Data — *Cumulative GPA:* ***4.02/4.00***
Advisors: Takunari Miyazaki and Taikang Ning

PROFESSIONAL EXPERIENCE

Department of Engineering, Professor Taikang Ning — **Trinity College, Hartford, CT**
Research Assistant, *Focus: Digital signal processing of heart sounds* — *January 2018–Present*

- Conducted machine learning analysis by training *KNN* and *SVM* models in Python for heart murmur detection and classification, which formed the core contribution to a 1st-author publication and presentation in the International Congress on Image and Signal Processing, BioMedical Engineering and Informatics that resulted in an invitation for submission to a special issue of *Methods*
- Adapted MATLAB feature extraction code to improve heart sound classification based on cross-validated accuracy and confusion matrices

Citibank N.A. — **Dallas, Texas**
Enterprise Infrastructure Operations & Technology Summer Analyst — *July 2020–August 2020*

- Collaborated with an agile intern team to blueprint a Citi chatbot and virtual queuing system to support social distancing using AWS Lex & Lambda that is expected to be implemented due to our successful presentation to senior management
- Coordinated weekly sprint tasks and initiated a unique data analytics project using Power BI to set our intern team apart

SAS Institute — **Cary, NC**
Software Engineering Intern, AI team in Platforms Research & Development — *May 2019–July 2019*

- Created 4 AI features for the SAS Data Studio software to suggest appropriate column-specific and table-wide data transformations to less technical users during data preparation prior to machine learning analysis; developed these by adapting microservices using Java, FreeMarker and Docker
- Implemented wildcard support to increase speed and efficiency of data preparation AI model provisioning using Java

Department of Engineering, Professor Taikang Ning — **Trinity College, Hartford, CT**
Summer Research Assistant — *May 2018–August 2018*

- Developed Android app in Android Studio that wirelessly collects, graphs, analyzes and stores heart sound data using Java and Bluetooth, which resulted in a co-author publication and presentation in the IEEE International Conference on Signal Processing

PUBLICATIONS

A. Levin, A. Ragazzi, S. Szot, T. Ning, "A Machine Learning Approach to Heart Murmur Detection and Classification." In *Methods Special Issue on Machine Learning Methods for Bio-Medical Image and Signal Processing: Recent Advances*. (Extended version of A. Levin, A. Ragazzi, S. Szot, T. Ning, "A Machine

Learning Approach to Heart Murmur Detection and Classification." In *2020 13th International Congress on Image and Signal Processing, BioMedical Engineering and Informatics)*. *By invitation, submission in progress.*

A. Levin, A. Ragazzi, S. Szot, T. Ning, "A Machine Learning Approach to Heart Murmur Detection and Classification." In *2020 13th International Congress on Image and Signal Processing, BioMedical Engineering and Informatics (CISP-BMEI)*. IEEE, 2020.

S. Szot*, **A. Levin***, A. Ragazzi, T. Ning, "A Wireless Digital Stethoscope Design." In *2018 14th IEEE International Conference on Signal Processing (ICSP)*, pp. 74-78. IEEE, 2018.

HONORS & AWARDS

Presidential Scholarship – Full-tuition merit scholarship to Trinity College *2017–2021*

Goldwater Scholarship – Most prestigious undergraduate STEM award *2020*

President's Fellow – Most outstanding senior computer science major chosen by CS department *2020*

Rewriting the Code Fellow – Professional program for college women in technology *2019, 2020*

NASA CTSGC Undergraduate Scholarship – For dedication to science and technology research *2019*

Phi Gamma Delta First Year Prize in Mathematics – For outstanding achievement first year math *2019*

Dean's Scholar Class of 2021 – Top 4% of Trinity College Class of 2021 based on GPA *2018*

PRESENTATIONS

Conference Presentation. "A Machine Learning Approach to Heart Murmur Detection and Classification." Presented at the 2020 International Congress on Image and Signal Processing, BioMedical Engineering and Informatics, Online. October 18th, 2020.

Conference Presentation. "A Wireless Digital Stethoscope Design." Presented at the 2018 IEEE International Conference on Signal Processing, Beijing, China. August 13th, 2018.

TEACHING EXPERIENCE

Teaching Assistant **Trinity College, Hartford, CT**
Mathematical Foundations of Computing, Professor Takunari Miyazaki *Spring 2020*

- Independently led weekly TA sessions and graded weekly discrete math proof problem sets for 50 students

Teaching Assistant **Trinity College, Hartford, CT**
Introduction to Computing, Professor Takunari Miyazaki *Spring 2019*

- Assisted students one-on-one during weekly labs, independently led weekly TA sessions, and graded both homework assignments and programming projects for 50 students

LEADERSHIP & VOLUNTEERING EXPERIENCE

Goldwater Scholar Community Council **National Organization**
Mentorship Initiative Coordinator & Executive Council Member *May 2020–Present*

- Spearheaded a national community building effort by leading a committee of 10 council members in launching a mentorship program to connect undergraduate scholars with older scholars in both academia and industry
- Developed an algorithm in Python with FlashText NLP library to match 1300+ mentors and mentees based on profile data

Rewriting the Code **National Organization**
Fellow & Cohort Leader *June 2019–Present*

- Organized weekly virtual professional & social events for 155+ female RTC fellows across the country
- Mentored a younger fellow for a 6-month cycle, offering advice and support in various professional areas, as part of the RTC Big/Little program

Connectikids **Trinity College, Hartford, CT**
Volunteer Tutor *January 2018–Present*

- Tutored Hartford underprivileged youth: worked with first and second grade students one-on-one weekly, helping them with their homework and engaging them in other educational activities

Other Organizations: IHSA Equestrian Team, IEEE Student Chapter, ACM Student Chapter, Built By Girls

SKILLS

Computer: Python (pandas, scikit-learn), Java, C, SQL, SAS, HTML/CSS, Jupyter, Git, Gerrit, Jira, Postman, Docker, Linux, Microsoft and Google Suite, Latex

Language: Russian (proficient), German (intermediate)