# ALISA LEVIN

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## 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

**Relevant Courses:** Intro to Machine Learning, Artificial Intelligence, Data Structures & Algorithms, Human-Computer Interaction, Database Fundamentals, Operating Systems, Theory of Computation, Intro to Mathematical Modeling

## PROFESSIONAL EXPERIENCE

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

- Conduct machine learning analysis by training *KNN* and *SVM* models in **Python** for heart murmur detection and classification
- Adapt **MATLAB** feature extraction code to improve heart sound classification based on cross-validated accuracy and confusion matrices
- Developed Android app in Android Studio that wirelessly collects, graphs, analyzes and stores heart sound data using **Java** and **Bluetooth**

**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 to improve data preparation & transformation tools for nontechnical SAS Data Studio users 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*

- Remained on campus to continue the above described work more intensively over the summer
- Co-wrote a conference paper on this research and presented it on behalf of our lab at the International IEEE Conference on Signal Processing on behalf of my lab

## PUBLICATIONS

**A. Levin**, A. Ragazzi, S. Szot, T. Ning, "A Machine Learning Approach to Heart Murmur Detection and Classification," *Proc. 13th International Congress on Image and Signal Processing, BioMedical Engineering and Informatics*, August 17–10, 2020. (**In review**)

S. Szot\*, **A. Levin**\*, A. Ragazzi, T. Ning, "A Wireless Digital Stethoscope Design," *Proc. 14th IEEE International Conference on Signal Processing*, Beijing, China, August 12–16, 2018.

## HONORS & AWARDS

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

**Goldwater Scholarship** – Most prestigious undergraduate STEM award                         *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*

## TALKS & PRESENTATIONS

**Oral Presentation**. A Wireless Digital Stethoscope Design. *IEEE International Conference on Signal Processing*, Beijing, China. August 13th, 2018.

**Poster Presentation**. A Wireless Digital Stethoscope Design. *14th Annual Summer Research Symposium*. Trinity College , Hartford, CT. September 25th, 2018.

**Poster Presentation**. Design and Implementation of a Smart Digital Stethoscope. *31st Annual Research Symposium*. Trinity College, Hartford, CT. May 2nd, 2018.

## TEACHING EXPERIENCE

**Teaching Assistant**                                                                 **Trinity College, Hartford, CT**
*Mathematical Foundations of Computing*, Professor Takunari Miyazaki                         *Spring 2020*
- Led weekly TA sessions and graded weekly discrete math proof problem sets for **50** students
- One of two TAs, collaborating directly with the professor

**Teaching Assistant**                                                                 **Trinity College, Hartford, CT**
*Introduction to Computing*, Professor Takunari Miyazaki                         *Spring 2019*
- Assisted students one-on-one during weekly labs, led weekly TA sessions, and graded both homework assignments and programming projects for **50** students
- One of four TAs, collaborating directly with the professor

## LEADERSHIP & VOLUNTEERING EXPERIENCE

**Goldwater Scholar Community Council**                                 **National Organization**
*Mentorship Initiative Coordinator & Executive Council Member*                 *May 2020–Present*
- Spearhead 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
- Develop 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*
- Organize weekly virtual professional & social events for **155+** female RTC fellows across the country
- Mentor 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*
- Tutor Hartford underprivileged youth. Work 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

**Language:** Russian (proficient), German (intermediate)