

# LELA BONES

Cornell University PhD Student in Biomedical Engineering

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## EDUCATION

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### Cornell University, NY

PhD in Biomedical Engineering

2020 - (Expected)2026

Lewis Lab GRA

GPA : 3.93/4

### Salisbury University, MD

Bachelors of Science in Mathematics

2016 - 2020

Bachelors of Science in Computer Science

2016 - 2020

GPA : 3.76/4

Honors: *Magna Cum Laude*, *Bellavance Honors College*, *Departmental Honors*,  
*Department Service Award*, *Henson Deans List*

## MENTOR EXPERIENCES

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### NSF LSAMP Mentor

May 2021 - August 2021

Cornell University, Ithaca, NY

Over the summer, I mentored a rising Senior undergraduate student doing an REU in the Lewis Lab. Together we learned how to read scientific literature, perform data analysis in Matlab, and make/present a poster.

## RESEARCH EXPERIENCES

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### Amgen Scholar at Johns Hopkins

May 2019 - August 2019

Johns Hopkins, Baltimore, MD

- Comparing motion capture data using a Siamese Neural Network Model.
- Learning hand on research skills in a laboratory setting.
- Networking with some of the top bio-engineers in the country.

### Undergraduate Research Fellow

May 2018 - August 2018

National Institute of Standards and Technology, Gaithersburg, MD

- Creating character level language models using Recurrent Neural Networks.
- Generating a natural language reference data set from the language model.
- Collaborating with companies in the manufacturing industry and their data sets.
- Developing and demonstrated a visualization dashboard of tagged style data.

## WORK EXPERIENCE

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### Peer Tutor

August 2019 - March 2020

Salisbury University, Salisbury, MD

- Holding sessions specifically for one class.
- Supplementing the teaching of the professors.
- Creating study guide material for exam reviews.

### Maker Lab Technician

August 2018 - March 2020

Salisbury University, Salisbury, MD

- Assisting students in building projects with 3-D printers, 3-D scanners, Arduino boards, Raspberry Pis, and an HTC Virtual Reality Headset.
- Managing, coordinating, and troubleshooting the technology in the lab.

*Resident Assistant*

August 2017 - December 2018

Salisbury University, Salisbury, MD

- Coordinating biweekly programs/events for the resident.
- Aiding residents with academic, time management, social, and personal problems.
- Engaging and maintaining the community of the resident halls.

*Tutor*

August 2017 - March 2020

Salisbury University, Salisbury, MD

- Privately tutoring individuals ranging from high school mathematics up to college level.
- Assisting students in lower level college math and computer science courses.
- Assisting second English language speaking students in algebra at Bennett High with the Gear Up program.

*Software Engineer*

May 2017 - August 2017

OmniTech Professionals, Salisbury, MD

March 2020 - August 2020

- Managing websites for small companies.
- Designing and developing an interactive children's application using Phonegap.

*Research Help Desk*

September 2016 - May 2017

Salisbury University, Salisbury, MD

- Assisting patrons with research related questions, through the phone, face-to-face, and on the web chat.
- Navigating World Cat Catalog database system.

## SELECTED CONFERENCES/PUBLICATIONS

### **National Conference of Undergraduate Research**

April 2019

*Interpreting EEG signals with OpenBCI Hardware*

Lela Bones, Dr. Joseph Anderson

Kennesaw, Georgia

### **Submitted Accepted with Minor Revisions**

*Conjecture  $O$  holds for some horospherical varieties of Picard rank 1.*

L. Bones, G. Fowler, L. Schneider, R. Shifler.

### **Joint Mathematics Meeting**

January 2019

*Conjecture  $\mathcal{O}$  holds for some Horospherical Varieties of*

*Picard rank 1*

Baltimore, MD

Lela Bones, Garrett Fowler, Dr. Lisa Schneider, and Dr. Ryan Shifler

### **NIST SURF Plenary Speaker**

August 2018

*Synthesizing and Visualizing Data from Maintenance Logs for*

*Smart Manufacturing Analysis*

Gaithersburg, MD

Lela Bones, Thurston Sexton

### **Salisbury Undergraduate Student Research Conference**

April 2018

*A mathematical model for linguistic migration and the*

*popularity of languages*

Salisbury, MD

Shannon Bull, Lela Bones, and Laurie Short

## TECHNICAL SKILLS

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*Programming Languages:* Python, C++, C, Java, Bash, JavaScript  
*Scientific Tools:* Matlab, Wolfram Mathematica, Minitab, Pytorch, OpenMPI/MPICH, SciKit-Learn, Tensorflow, Scipy, LAPACK, HoloViews  
*Project Management Technologies:* Monday.com, Github  
*Web Backend Technologies:* Neo4J, MongoDB, PHP, SQL  
*Web Frontend Technologies:* Flask, Bootstrap, NodeJS, ReactJS, AngularJS

## EXTRA CURRICULAR/ACTIVITIES

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Cornell Graduate Student School Outreach Program, <i>Catalog and Survey Coordinator</i>	August 2021 - Present
Vaccination Conversations with Scientists, <i>Organizing Leader</i>	June 2021 - Present
Biomedical Engineering Women Group, <i>Professional Lunch Series Coordinator</i>	January 2021 - Present
Biomedical Engineering Society, <i>Co-Chair of Community Engagement</i>	January 2021 - Present
Omnicon Delta Kappa Honor Society, <i>President</i>	November 2019 - May 2020
2019 Amgen Scholar Symposium, <i>Attendee</i>	July 2019
Technica, <i>Participant</i>	November 2018
JP Morgan Code for Good, <i>Participant</i>	September 2017, September 2018
SU Math and Computer Science Club, <i>President</i>	August 2018 - May 2020
SU Women in Technology Club, <i>Secretary</i>	November 2018 - May 2020
Delpha Alpha Pi Honor Association, <i>Treasurer</i>	May 2018 - May 2020
Phi Mu Epsilon Honor Society, <i>Member</i>	May 2018 - Present
Association for Women in Mathematics, <i>Member</i>	January 2017 - May 2020
Mathematical Association of America, <i>Member</i>	August 2016 - May 2020
SU Student Government Association, <i>Senator</i>	August 2016 - May 2017
College Park Research Symposium, <i>Attendee</i>	September 2017
Asian and Pacific Islander Club, <i>Chair of Education</i>	August 2017 - May 2017

## AWARDS AND ACCOMPLISHMENTS

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Cornell University Fellowship 2020, *Recipient*  
Upsilon Pi Epsilon 2019 Academic Achievement Award, *Recipient*  
Delta Alpha Pi 2019 Scholarship, *Runner Up*  
We are SU Capital Campaign Kickoff Gala, *Keynote Speaker*  
Comap Mathematics Competition for Modeling 2019, *Meritorious Honor*  
Joint Mathematics Meeting 2019, *Outstanding Poster Award*  
Comap Mathematics Competition for Modeling 2018, *Honorable Mention*  
Daily Computers Inc. 2018 and 2019 Scholar, *Recipient*  
K and L Microwave Scholar 2017, *Recipient*  
Salisbury University Henson Scholar 2017-Present, *Recipient*  
Salisbury University Presidential Scholar 2016, *Recipient*  
Salisbury University Delmarva Peninsula Scholar 2016, *Recipient*  
Salisbury University Foundation Scholar 2016, *Recipient*  
Fulton Bank Diversity Scholar 2016, *Recipient*