

# Regina Rex

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**Education**      **University of Wisconsin-Superior (UWS)**      Aug. 2020  
Bachelor of Science in Computer Science and Mathematics      GPA: 3.61/4.00  
Advisors: Dr. Sergei Bezrukov and Dr. Steven Rosenberg

**Research Experience**      **University of Illinois at Urbana-Champaign (UIUC) - Parasol Lab**  
Supervisors: Diane Uwacu, Dr. Shawna Thomas, and Dr. Nancy M. Amato

- **Undergraduate Researcher**      Sept. 2019 - Dec. 2019  
Studying the application of motion planning in bioinformatics to help improve the efficiency of drug design
- **Research Intern - CRA-W DREU Participant**      May 2019 - Aug. 2019  
Conducted experiments on the clearance-bias method

**Texas A&M University (TAMU) - Parasol Lab**  
Supervisors: Diane Uwacu, Dr. Shawna Thomas, and Dr. Nancy M. Amato

- **Remote Research Collaborator**      Sept. 2018 - Dec. 2018  
Studied topological guided sampling-based motion planning algorithms
- **Research Intern - CRA-W DREU Participant**      May 2018 - Aug. 2018  
Worked on biasing a motion planning algorithm using topological properties to help robots navigate their environments

**UWS - Regional Economic Indicators Forum (REIF)**  
Supervisor: Dr. Rubana Mahjabeen

- **Research Assistant**      Oct. 2016  
Assisted with data collection for the 2016 REIF to provide local businesses with information for strategic planning, expansion, and hiring decisions

## Selected Research Workshops and Involvements

- **MD4SG - Developing Nations**      Nov. 2018 - Present  
Member of a working research group focused on research projects for under-resourced communities
- **Indiana University - HelloResearch Workshop**      Oct. 2018  
Advisors: Dr. David Crandall and Dr. Donald Williamson  
Worked in a team to train a convolutional neural network to combine audio processing and computer vision for activity recognition
- **Cornell University - SoNIC Workshop**      June 2018  
Advisor: Dr. Hakim Weatherspoon  
Studied cloud computing starting from the bottom of the networking stack from photons of lambda networks using a software-defined network interface

## Selected Fellowships, Awards, and Honors

### 2020 and 2019 Rewriting the Code Fellow

A year-long fellowship for undergraduate women in STEM

### 2019 Heidelberg Laureate Forum (HLF) - Young Researcher

1/200 young researchers selected to attend the 2019 Heidelberg Laureate Forum

### 2019 Impact Fellow

A selective (5% acceptance rate) computer programming fellowship for the next generation of social entrepreneurs

### 2019 and 2018 CRA-W Distributed REU Participant

A highly selective program by the Computing Research Association - Women (CRA-W), which matches students with a faculty mentor for a summer research experience

**2019 and 2018 CRA-W GHC Research Scholar**

Participant in a research-focused program organized for undergrads interested in computing research careers

**2019 Georgia Tech Focus Scholar**

Sponsored to attend a graduate school visitation program at Georgia Tech

**2018 WAFR Robot Guru Workshop - Undergrad Scholar**

Virtual participant of the 13th International Workshop on the Algorithmic Foundations of Robotic (WAFR) Robot Guru Workshop

**2013 FCT Agency for Science & Technology Recognition**

Awarded by the Ministry of Science & Technology in Federal Capital Territory (FCT), Nigeria, for participation in various STEM competitions

**Technical Reports**

**Regina Rex**, Bonnie Wang, Diane Uwacu, Shawna Thomas and Nancy M. Amato. "Bias-guided Metrics for Motion Planning Problems." Technical Report, Parasol Laboratory, Department of Computer Science, University of Illinois at Urbana-Champaign, IL, USA, Aug. 2019

**Regina Rex**, Diane Uwacu, Shawna Thomas and Nancy M. Amato. "Metrics for Efficient Environment Exploration in Robot Motion Planning." Technical Report, Parasol Laboratory, Department of Computer Science, Texas A&M University, College Station TX, USA, Aug. 2018

**Technical Posters & Presentations**

**Clearance-bias Exploration**

- Grace Hopper Celebration - Orlando, FL Oct 2019
  - UIUC CS REU Symposium - Urbana, IL Aug. 2019
- Best Research Poster Award**

**Assessing Protein-Ligand Binding Accessibility** Aug. 2019  
Bonnie Wang, Regina Rex, Diane Uwacu, Shawna Thomas and Nancy M. Amato

**Metrics for Efficient Environment Exploration**

- UWS Fall Symposium - Superior, WI Nov. 2018
  - HelloResearch Workshop - Bloomington, IN Oct. 2018
- Best Research Presentation Award, Second Place**
- Grace Hopper Celebration - Houston, TX Sept. 2018
  - TAMU REU Scholars Symposium - College Station, TX Aug. 2018

**IRB Proposal System**

- High Impact Practices Day of Celebration - Superior, WI Apr. 2018

**Digital Alarm Clock**

- High Impact Practices Day of Celebration - Superior, WI Apr. 2018
- 17th UW System Symposium - Green Bay, WI Feb. 2018

**Invited Talks and Presentations at UWS**

- **Panelist** - Advising Day Superior, WI Oct. 2019  
Panel discussion on opportunities for Math and Computer Science majors
- **Guest Speaker** - CSCI 340 Mar. 2018  
Invited to give a guest lecture on using JIRA for project management
- **Talks** - Mathematics and Computer Science (MCS) Club  
Gave talks about my experience at: Snap Women in Tech summit (Oct. 2017), GHC17 (Nov. 2017), and GHC18 (Nov. 2018)

<b>Work Experience</b>	<b>PathCheck Foundation</b> — Developer - MA (Remote) Jun. 2020 - Present Working in the algorithms team on the implementation of k-proximity privacy on contact tracing mobile application for user and health care providers
	<b>Residence Life, UWS</b> — Resident Assistant (RA) - WI Sept. 2017 - Feb. 2018 Developed an inclusive community, while providing paraprofessional advice to 54 diverse undergraduate students on personal and academic issues
	<b>Goldman Sachs</b> — Technology Summer Analyst - NY May 2017 - Aug. 2017 Interned in the finance engineering division as a software engineer and developed functionalities for their risk reporting platforms
	<b>OjaExpress</b> — Software Engineering Intern - IL (Remote) Jan. 2017 - Mar. 2017 Developed a search engine for the OjaExpress platform to help customers find useful data
	<b>Hotels.ng</b> — Software Engineering Intern - Lagos, Nigeria Jan. 2017 - Apr. 2017 Worked remotely on the front-end engineering team to design, develop, and polish web pages
<b>Tutoring Experience</b>	<b>Math Lab — UWS Educational Success Center</b> <ul style="list-style-type: none"> <li><b>Math Tutor</b> Summer 2016 and Spring 2019 Tutored individuals and small groups of students in nine different Mathematics and Computer Science courses</li> <li><b>CSCI 101 Supplemental Instruction Leader</b> Fall 2017 Conducted two 50 minute sessions and office hours weekly to help improve students understanding of class material and assisted them with their programming homework in Python, PEP8 Assembly, HTML/CSS, and JavaScript</li> </ul>
<b>Selected Travel Grants and Scholarships</b>	<b>Travel Grants</b> <ul style="list-style-type: none"> <li>2019 and 2017 AnitaB.org GHC Scholar Orlando, FL</li> <li>2019 HLF - Heinz Trox Grant Heidelberg, Germany</li> <li>2019 ACM TAPIA Scholar, sponsored by IBM San Diego, CA</li> <li>2019 and 2020 HBCU@SXSW Cohort Austin, TX</li> <li>2019 WECODE Conference Scholarship Recipient Cambridge, MA</li> </ul>
<b>Selected Leadership, Services, and Memberships</b>	<b>Member</b> - BlackInAI Summer 2018 - Present <b>MCS Senator</b> - Student Government Association Fall 2019 <b>Vice President</b> - MCS Club Fall 2018 - Spring 2020 <b>President</b> - African Students Association (ASA) Fall 2018 - Spring 2019 <b>Webmaster &amp; Software Guru</b> - MCS Club Fall 2017 - Spring 2018 <b>Co-founder &amp; Public Relations Officer</b> - ASA Fall 2017 <b>Volunteer</b> - UWS Annual High School Math Meet Spring 2016 - Spring 2019
<b>Selected Coursework</b>	<b>Mathematics:</b> Linear Algebra, Probability, Cryptography, Calculus I, II & III, Discrete Structures, Theory of Computation, Algorithm Design and Analysis <b>Computer Science:</b> Object-Oriented Programming, Assembly, Algorithms and Data Structures, Software Development, Database Systems, Operating Systems, Computer Arch., Net-Centric Computing, Embedded Systems Design
<b>Computer Skills</b>	<b>Languages:</b> Java, C, C#, C++, Assembly, Python, SQL, HTML/CSS, JavaScript, XML <b>Technologies:</b> Apache Spark, Hadoop, AWS, Docker, Git, SVN, CVS, UNIX, Bash