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

Research Experience

Harvard University - Microrobotics Lab
Supervisors: Clark Teeple, Moritz A. Graule, Robert Wood

- **Research Intern** — Nov 2020 - Present
  Developing a Gazebo integration for the soft robotics simulation software

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
  Studied 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 in protein and robotics environments to highlight the advantages of using workspace properties for planning

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
  Mentors: 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
  Mentor: 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
- 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 — Superior, WI
- **Panelist** - Advising Day — 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)

Work Experience	**PathCheck Foundation** — Developer - MA (Remote) Jun. 2020 - Present

Work Experience

PathCheck Foundation — Developer - MA (Remote)   Jun. 2020 - Present
Working in the algorithms team on the implementation of spatial k-anonymity privacy on contact tracing mobile application for user and health care providers

Residence Life, UWS — 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

Goldman Sachs — 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

OjaExpress — Software Engineering Intern - IL (Remote)   Jan. 2017 - Mar. 2017
Developed a search engine for the OjaExpress platform to help customers find useful data

Hotels.ng — Software Engineering Intern - Lagos, Nigeria   Jan. 2017 - Apr. 2017
Worked remotely on the front-end engineering team to design, develop, and polish web pages

Tutoring Experience

Math Lab — UWS Educational Success Center

- **Math Tutor**   Summer 2016 and Spring 2019
  Tutored individuals and small groups of students in nine different Mathematics and Computer Science courses

- **CSCI 101 Supplemental Instruction Leader**   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

Selected Travel Grants and Scholarships

Travel Grants
- 2019 HLF - Heinz Trox Grant   Heidelberg, Germany
- 2019 ACM TAPIA Scholar, sponsored by IBM   San Diego, CA
- 2019 and 2020 HBCU@SXSW Cohort   Austin, TX

Selected Leadership, Services, and Memberships

Member - BlackInAI	Summer 2018 - Present
MCS Senator - Student Government Association	Fall 2019
Vice President - MCS Club	Fall 2018 - Spring 2020
President - African Students Association (ASA)	Fall 2018 - Spring 2019
Webmaster & Software Guru - MCS Club	Fall 2017 - Spring 2018
Co-founder & Public Relations Officer - ASA	Fall 2017
Volunteer - UWS Annual High School Math Meet	Spring 2016 - Spring 2019

Selected Coursework

Mathematics: Linear Algebra, Probability, Cryptography, Calculus I, II & III, Discrete Structures, Theory of Computation, Algorithm Design and Analysis
Computer Science: Object-Oriented Programming, Assembly, Algorithms and Data Structures, Software Development, Database Systems, Operating Systems, Computer Arch., Net-Centric Computing, Embedded Systems Design

Computer Skills

Languages: Java, C, C#, C++, Assembly, Python, SQL, HTML/CSS, JavaScript, XML
Technologies: Apache Spark, Hadoop, AWS, Docker, Git, SVN, CVS, UNIX, Bash