FARNAZ BAKSH

1. CITIZENSHIP: Guyana RESIDENCE: Estonia

2. EDUCATION

M.Sc University of Tartu, Robotics & Computer Engineering 2021 - 2023 Thesis: "An Open Source Robotic Study Companion for University Students" Advisors: K.Kruusamäe, S.Schumann, A.Luhtaru Leadership Program; 146/120 ECTS

B.Sc University of Guyana, Computer Science

2016 - 2020

Last Updated: 9th July 2023

Thesis: "Investigating the Use of an Affective Robot to Aid Students with Learned Helplessness"

Overall GPA 3.6/4.0 | Major GPA 3.8/4.0

CSEC Global Technology, Physics & Chemistry

2012 - 2013

CSEC Al-Ghazali Islamic Academy, Business Studies

2006 - 2011

Valedictorian; Best Graduating Student; Head Prefect

3. Research Interest

Human-Robot-Interaction, Social Robots, Affective Computing, Educational Technology, Affective Robotics, Special Educational Needs

4. Research Experience | Publications

XR Teleoperation Demo Development

University of Tartu, Estonia July 2023

Co-Authors: M. Zorec, U. Norbisrath Conference: iMETA 2023 (in review)

An Evaluation of a Hybrid STEM-Robotics Programme for Students with Special Needs in Guyana, Guyana 2022 - 2023

Co-Authors: P. DeFreitas, M. Zorec, J. Todd, O. Vanlewin

Conference paper: World Literacy Summit 2023, HCI International 2023

Journal accepter: HCI International 2023

University of Tartu, Estonia Student Intern, iCV Research Lab Feb 2022 - Jun 2022

• Research on Gaze Estimation Methods.

5. Professional Experience

SDTSystems, Slovenia

Feb 2022 - Sept 2022

IoT Intern

- Erasmus+ traineeship (Jun Sept 2022)
- Researching and investigating development solutions
 - o IoT Development: NB-IoT and LoraWAN.
- Solidworks modeling of electronic components.
- Proficient in report organizing and concise presentations.
- Startup network ecosystem experience in Slovenia.

University of Guyana, Guyana

Oct 2020 - Sept 2021

Assistant Web and Social Media Coordinator

- Coordinated with Web Dev team for website development.
- Provided technical support for online presence.
- Resolved end-user support issues.
- Developed ICT policies for campus-wide usage.

University of Guyana Robotics Club, Guyana **Founder | Student President**

Oct 2016 - Dec 2020

- Established a multidisciplinary makerspace.
- Organised workshops and public events (including Roboduino 2019, RoboPi 2020, MLH Hack Day 2019, among others)
- Mentored undergraduate students.
- Managed and coordinated STEM projects.
- Sought out, networked with and visited universities abroad (*including* The Savannah College of Design (SCAD), Georgia Institute of Technology (Georgia Tech), Startup Incubators in Atlanta, New Jersey Institute of Technology (NJIT).

6. TEACHING | MENTORING EXPERIENCE

Guyanese Girls Code, Online

Jun 2021 - Aug 2022

Mentor | Trainer, Office of the Prime Minister Guyana

- Developed the first national-virtual GGC Summer Camp.
- Educated over 70+ Guyanese girls.
- Taught problem-solving and programming using Scratch.
- Facilitated the programme for two consecutive years.
- Expanded curriculum and integrated VEXCode VR.

University of Guyana, Turkeyen Campus

Academic Tutor | Lab Instructor, Department of Computer Science

 Information Management Concepts and Fundamentals -ITE1200 Apr

TTE1200 April 2021 - July 2021

Computer Literacy - MNG2100

Sept 2018 - Dec 2018

STEM Robotics SEN Programme, Guyana

Jan 2020 - Dec 2020

Coordinator | Trainer, Guyana Council of Organisations for Persons with Disabilities

- Led team in developing a novel STEM-Robotics curriculum.
- Implemented curriculum in 5 Special Educational Needs Schools.
- Worked with students with various disabilities in Guyana.

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FIRST Global, Guyana

Mar 2017 - Feb 2019

Team Mentor | Manager, Guyana National Robotics Team

- Co-founded the national team for the inaugural competition.
- Oversaw technical and administrative aspects of managing the team.
- Represented Guyana in Washington DC (2017) and Mexico City (2018).

STEM Outreach and Engagement, Guyana

July 2016 - Jan 2019

Mentor | STEM Ambassador, STEMGuyana

University of Florida | University of Guyana

- Contributed to outreach programs promoting STEM education.
- Conducted interactive workshops, seminars, and training sessions (*including collaborations with:* St Ann's Orphanage for Girls, Guyana Deaf Association, St. John Bosco Orphanage, etc).
- Assisted in organising competitions, events and exhibitions (*including* National Robot & Tech Exhibition 2017 & 2018, Berbice Tech Exhibition, etc).
- Engaged in promoting hands-on learning and innovation in STEM.
- Events Participated: Youth Innovation Project of Guyana (YIPoG), DevX Developers Exhibition, GTT Innov8 Summit, International Women's Day Expo, Annual Orphan and Vulnerable Children (OVC), among others.

7. Professional Training

| ENLIVE Virtual Exchange Project ENLIGHT University Network, Online | Feb 2023 - Apr 2023 |
|--|---------------------|
| Open Seventeen (O17) Challenge Citizen Science Centre Zurich, Online | Oct 2019 - Nov 2019 |
| Global Entrepreneurship Exchange Program University of Massachusetts Lowell, USA | July 2019 |
| Introductory Qualitative Research Method | Jan 2019 |

8. Professional Affiliations

| University of Guyana Robotics Club Advisor Mentor | 2020 - Present |
|---|--------------------------|
| Tartu Hackerspace (Häkkerikoda) Member Workshop Co-organizer | Feb 2023 - Jun 2023 |
| Caribbean Education Project (CaribEd) Guyanese Representative Coordinator | Mar 2020 - Dec 2020 |
| University of Guyana Student Clubs CompSci TechEd Rev Club, Co-founder Vice In Girls in Computing Club, Member | 2017 - 2019 President |

Guyana Philatelic Society

2017 - 2018

Member | Stamp Collector Enthusiast

• UG Astronomical Society, Member

9. ACADEMIC CONFERENCES

| HCI International Conference Student Volunteer (Denmark) | July 2023 |
|--|-----------|
| Cyber Innovation (Küberinnovatsioon) Conference 3D Printing Workshop Volunteer (Estonia) | June 2023 |
| 22nd Biennial Caribbean Academy of Science (CAS) Conference <i>CAS Talk</i> <i>Panelist</i> , Youth in Science Forum (Online) | Aug 2021 |
| University of Guyana Undergraduate Research Conference (URC) Student Volunteer Session Chairperson (Guyana) | Apr 2019 |
| CARINA/UWI Astronomy Conference UG Representative Attendee (Trinidad) | May 2017 |

10. Presentations | Invited Talks

| Orientation for New and Continuing Students by Faculty of Natural University of Guyana Presenter (Understanding the Value of Student Clubs) | Science, Oct 2021 | |
|--|----------------------|--|
| Virtual Tech Fair by Girls in Tech & UniGuyana CompSci Dept Cohost Presenter | Aug 2020 | |
| GEP Guyana Networking Event by the University of Guyana Speaker Co-organiser | Sept 2019 | |
| Talk on Robotics , National Science Camp by the Ministry of Education, July 2018 Speaker (Robotics as a field of study & getting started in Guyana) | | |
| Ministry of Public Telecommunications, Presenter Panelist Launch of Guyanese Girl Code Program Girls in ICT Day Event | Apr 2018 Apr 2018 | |
| Tech Talk 2017 by UG CS TechEd Rev Club Co-organiser Presenter (Robotics Kits) | Sept 2017 | |
| Public Seminar on Astronomy and Astrophotography by UGAS (UG Astronomical Society) & AAAG (Amateur Astronomer Association of Guyana) Presenter Sept 2017 | | |

11. Community Service

University of Tartu Buddy Programme

Buddy | Helper, Aug 2022 - Jun 2023

Garage48 Hackathon

Materials Co-Mentor, Feb 2023

University of Tartu Nature Museum: Loodusfestivali / Nature Festival

Student Photographer, Estonia, Jun 2022

Dept of Computer Science: Open|Career Day Exhibition

Student Volunteer, University of Guyana, 2017 - 2019

Lusignan - Good Hope Learning Centre

Mentor | STEM-Robotics Teacher, Guyana, Feb 2017 - Dec 2019

Brickdam Youth Group

Lego Robotics Teacher, Guyana, Sept 2016 - Dec 2016

Science Fair Judge

- Georgetown International Academy, May 2018
- St. Rose's High School, Nov 2017

Host | Co-organiser | Volunteer

- Hackerspace LinuxFest, Mar 2023
- Virtual Hour of Code Event, UG Robotics Club, Dec 2020
- Introduction to Robotics for Medical Imaging Students, Feb 2020
- Graphic Design Workshop, University of Guyana, Mar 2019
- CS50x Puzzle Day, UG CS TechEd Rev Club, Apr 2017 & Mar 2019
- Tech4Girls Google Home Workshop, CANTO/GSMA, Jan 2019
- CybersecurityED Exhibit Cybersecurity Awareness Month, UG Cybersecurity Club & CS TechED Rev Club, Oct 2018
- Software Freedom Day 2018, University of Guyana Free & Open Source Software (FOSS) Club, Sept 2018
- National Hour of Code Outreaches at 5 schools in Guyana, Dec 2016 Jan 2017
- Introductory Lego Robotics Workshop, UG CS Dept, Oct 2016 Nov 2016

12. Trainings, Workshops, Others

| UniTartu Student Project Contest, Student Participant | Jun 2023 |
|---|----------|
| EdTech Estonia Hackathon, Participant | Oct 2022 |
| Demo4Green Approach Training, Student Participant | Jun 2022 |
| 3D Printing Workshop, Online Participant | Apr 2022 |
| Pueblo Science Workshop, Student Participant | Aug 2017 |

13. Languages

English: Native Language

Creoles and pidgins, English-based: Native Language

14. COMPUTER SKILLS

Programming: Python, Web Dev (HTML, CSS, JS)

Libraries: Pandas, Matplotlib, Seaborn, Numpy, OpenCV

Applications: Solidworks, Github, Zotero, OpenGL, ROS, LabVIEW LaTeX, Google Workspace, WPS Office, Microsoft Suite, Trello

Platforms: Windows, Linux (Ubuntu, Raspbian | Raspberry Pi OS)

15. Honours and Awards

| HCII2023 Student Design Competition, Bronze for RSC [Robotic Study Companion] Project | July 2023 |
|--|-------------|
| 30 Under 30 Caribbean Changemaker Honouree by Ignite Caribbean | June 2022 |
| DeltaX Competition [Team BTS] Robot Basketball, 3rd place [Team AWB] Pitch for New Start-up Ideas, 3rd place | Jan 2022 |
| Women in ICT - Award of Excellence by Office of the Prime Minister Guyana | Nov 2021 |
| The Council of the University Prize by The University of Guyana | 2019/2020 |
| Dean's List Faculty of Natural Science, University of Guyana | 2018 - 2020 |
| Guyana's National Youth Awards Innovation in Science & Technology by the Ministry of Culture, Youth and Sport, Guyana | Aug 2019 |
| Outstanding Women in Technology Award by Girls+Technology Initiative | May 2019 |

16. FEATURES

FIRST Global Newsletter

Aug 2019

Recognition for the development of Guyana's first makerspace - University of Guyana Robotics Club

Women in Engineering & Technology Awareness

2017 - 2019

#GYGirlPower campaign by the European Union & the Ministry of Public Infrastructure, Guyana

More info via social profiles:

- <u>Goodwall</u> [goodwall.io/farnaz-baksh]
- <u>Linkedin</u> [linkedin.com/in/farnaz-baksh]
- <u>Facebook</u> [facebook.com/farnazbaksh]