

**1. CITIZENSHIP:** Guyana  
**RESIDENCE:** Estonia

## **2. EDUCATION**

**Ph.D University of Tartu**, Computer Engineering 2023 - Present  
*Focus:* Human-Robot Interaction (HRI) - Education & Social Robotics  
Supervisor: K.Kruusamäe

**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  
*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**

**Open-Source Robotic Study Companion with Multimodal Human-Robot Interaction for Improving the Learning Experience of University Students**  
University of Tartu, Estonia Jan 2024  
Co-Authors: M. Zorec, K.Kruusamäe  
Journal: MDPI Applied Science (Pending revision | In-review)

**XR Teleoperation Demo Development**  
University of Tartu, Estonia Sept 2023  
Co-Authors: M. Zorec, U. Norbistrath  
Conference: iMETA 2023

**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  
Conferences: World Literacy Summit 2023, HCI International 2023  
DOI: 10.1007/978-3-031-35992-7\_36

## 5. RESEARCH EXPERIENCE | PUBLICATIONS

**University of Tartu**, Estonia Nov 2023 - Present  
**Junior Research Fellow**, Institute of Technology

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

- Research on Gaze Estimation Methods.

## 6. TEACHING | MENTORING EXPERIENCE

**University of Tartu**, Estonia Sept 2023 - Present  
**Specialist in Robotics**, Institute of Technology

- Creating lab manuals for LOTI.05.097 Computer-Aided Design (3 ECTS)
- Teaching Assistant for LTTL.00.004 Basics of Electronics (5 ECTS)
- Supervising BSc Students' Thesis
- SemuBot Project - Engineering Team

**University of Guyana**, Remote Sept 2023 - Present  
**Part-time Lecturer**, Department of Computer Science

- Co-lecturer for CSE2101 - Software Engineering
- Lecturer-in-charge for CSE1200 - Introduction to Computing II
- In charge of creating lab materials for CSE4101 - Artificial Intelligence
- Supervise undergraduate students' final-year projects (CSE4100)

**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 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.

**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**  
**Mentor | STEM Ambassador, STEMGuyana**

July 2016 - Jan 2019

- 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 EXPERIENCE

**SDTSysystems, Slovenia**  
**IoT Intern**

Feb 2022 - Sept 2022

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

**University of Guyana, Guyana**  
**Assistant Web and Social Media Coordinator**

Oct 2020 - Sept 2021

- 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).*

## 8. PROFESSIONAL TRAINING

**Winter School [Innovation & Business Design]**  
EIT Manufacturing, Estonia

Nov 2023 - Dec 2023

**STRADA Women in Manufacturing**  
EIT Manufacturing, Online

Sept 2023 - Nov 2023

**ENLIVE Virtual Exchange Project**  
ENLIGHT University Network, Online

Feb 2023 - Apr 2023

<b>Open Seventeen (O17) Challenge</b> Citizen Science Centre Zurich, Online	Oct 2019 - Nov 2019
<b>Global Entrepreneurship Exchange Program</b> University of Massachusetts Lowell, USA	July 2019
<b>Introductory Qualitative Research Method</b> University of Florida   University of Guyana	Jan 2019

## 9. PROFESSIONAL AFFILIATIONS

<b>University of Guyana Robotics Club</b> Advisor   Mentor	2020 - Present
<b>Tartu Hackerspace (Häkkerikoda)</b> Member   Workshop Co-organizer	Feb 2023 - Jun 2023
<b>Caribbean Education Project (CaribEd)</b> Guyanese Representative   Coordinator	Mar 2020 - Dec 2020
<b>University of Guyana Student Clubs</b> <ul style="list-style-type: none"> <li>• CompSci TechEd Rev Club, <i>Co-founder</i>   <i>Vice President</i></li> <li>• Girls in Computing Club, <i>Member</i></li> <li>• UG Astronomical Society, <i>Member</i></li> </ul>	2017 - 2019
<b>Guyana Philatelic Society</b> Member   Stamp Collector Enthusiast	2017 - 2018

## 10. ACADEMIC CONFERENCES

<b>Physiology in Focus</b> <i>Student Volunteer</i> (Estonia)	Sept 2023
<b>HCI International (HCII2023)</b> <i>Student Volunteer</i> (Denmark)	July 2023
<b>Cyber Innovation (Küberinnovatsioon)</b> <i>3D Printing Workshop Volunteer</i> (Estonia)	June 2023
<b>22nd Biennial Caribbean Academy of Science (CAS)</b> <i>CAS Talk</i>   <i>Panelist</i> , Youth in Science Forum (Online)	Aug 2021
<b>University of Guyana Undergraduate Research Conference (URC)</b> <i>Student Volunteer</i>   <i>Session Chairperson</i> (Guyana)	Apr 2019
<b>CARINA/UWI Astronomy Conference</b> <i>UG Representative</i>   <i>Attendee</i> (Trinidad)	May 2017

## 11. PRESENTATIONS | INVITED TALKS

- Orientation for New and Continuing Students** by Faculty of Natural Science,  
University of Guyana Oct 2021  
*Presenter (Understanding the Value of Student Clubs)*
- Virtual Tech Fair** by Girls in Tech & UniGuyana CompSci Dept Aug 2020  
*Cohost | Presenter*
- GEP Guyana Networking Event** by the University of Guyana Sept 2019  
*Speaker | Co-organiser*
- 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** Apr 2018
  - **Girls in ICT Day Event** Apr 2018
- Tech Talk 2017** by UG CS TechEd Rev Club Sept 2017  
*Co-organiser | Presenter (Robotics Kits)*
- Public Seminar on Astronomy and Astrophotography** by UGAS (UG  
Astronomical Society) & AAAG (Amateur Astronomer Association of Guyana)  
*Presenter* Sept 2017

## 12. 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

**13. TRAININGS, WORKSHOPS, OTHERS**

<b>UniTartu Student Project Contest</b> , <i>Student Participant</i>	Jun 2023
<b>EdTech Estonia Hackathon</b> , <i>Participant</i>	Oct 2022
<b>Demo4Green Approach Training</b> , <i>Student Participant</i>	Jun 2022
<b>3D Printing Workshop</b> , <i>Online Participant</i>	Apr 2022
<b>Pueblo Science Workshop</b> , <i>Student Participant</i>	Aug 2017

**14. LANGUAGES**

**English:** Native Language

**Creoles and pidgins, English-based:** Native Language

TOEFL iBT® Score: **96**

Online Linguistic Support (OLS) English Test: **C2**

**15. COMPUTER SKILLS**

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

**Libraries:** Pandas, Matplotlib, Seaborn, Numpy, OpenCV

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

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

**16. HONOURS AND AWARDS**

<b>ICSR2023 Robot Design Online Competition, Special Mention</b> for RSC [Robotic Study Companion] Project	Dec 2023
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<b>HCII2023 Student Design Competition, Bronze</b> for RSC [Robotic Study Companion] Project	July 2023
<b>30 Under 30 Caribbean Changemaker Honouree</b> by Ignite Caribbean	June 2022
<b>DeltaX Competition</b> <ul style="list-style-type: none"> <li>• [Team BTS] Robot Basketball, 3rd place</li> <li>• [Team AWB] Pitch for New Start-up Ideas, 3rd place</li> </ul>	Jan 2022
<b>Women in ICT - Award of Excellence</b> by Office of the Prime Minister Guyana	Nov 2021
<b>The Council of the University Prize</b> by The University of Guyana	2019/2020
<b>Dean's List</b> Faculty of Natural Science, University of Guyana	2018 - 2020
<b>Guyana's National Youth Awards</b> Innovation in Science & Technology by the Ministry of Culture, Youth and Sport, Guyana	Aug 2019
<b>Outstanding Women in Technology Award</b> by Girls+Technology Initiative	May 2019

## 17. FEATURES

<b>FIRST Global Newsletter</b> Recognition for the development of Guyana's first makerspace - University of Guyana Robotics Club	Aug 2019
<b>Women in Engineering &amp; Technology Awareness</b> #GYGirlPower campaign by the European Union & the Ministry of Public Infrastructure, Guyana	2017 - 2019

*More info via social profiles:*

- [Goodwall](https://goodwall.io/farnaz-baksh) [goodwall.io/farnaz-baksh]
- [LinkedIn](https://linkedin.com/in/farnaz-baksh) [linkedin.com/in/farnaz-baksh]
- [Facebook](https://facebook.com/farnazbaksh) [facebook.com/farnazbaksh]