# 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 Feb 2022 - Jun 2022 Student Intern, iCV Research Lab

• 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).

#### **5.1 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 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

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
<b>Tartu Hackerspace (Häkkerikoda)</b> Member   Workshop Co-organizer	Feb 2023 - Jun 2023
Caribbean Education Project (CaribEd) Guyanese Representative   Coordinator	Mar 2020 - Dec 2020
<ul> <li>University of Guyana Student Clubs</li> <li>CompSci TechEd Rev Club, Co-founder   Vice In Girls in Computing Club, Member</li> </ul>	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
<b>22nd Biennial Caribbean Academy of Science (CAS) Conference</b> <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 Science, University of Guyana Oct 2021 Presenter (Understanding the Value of Student Clubs)		
Virtual Tech Fair by Girls in Tech & UniGuyana CompSci Dept Cohost   Presenter	Aug 2020	
<b>GEP Guyana Networking Event</b> <i>by</i> the University of Guyana <i>Speaker</i>   <i>Co-organiser</i>	Sept 2019	
<b>Talk on Robotics</b> , 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	A 2010	
<ul><li>Launch of Guyanese Girl Code Program</li><li>Girls in ICT Day Event</li></ul>	Apr 2018 Apr 2018	
<b>Tech Talk 2017</b> by UG CS TechEd Rev Club Co-organiser   Presenter (Robotics Kits)	Sept 2017	
Public Seminar on Astronomy and Astrophotography by UGAS (University of		

Guyana Astronomical Society) & AAAG (Amateur Astronomer Association of Guyana)

# 11. COMMUNITY SERVICE

Presenter,

# University of Tartu Buddy Programme

Buddy | Helper, Aug 2022 - Jun 2023

# **Garage 48 Hackathon**

Materials Co-Mentor, Feb 2023

Sept 2017

#### 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
<ul> <li>DeltaX Competition</li> <li>[Team BTS] Robot Basketball, 3rd place</li> <li>[Team AWB] Pitch for New Start-up Ideas, 3rd place</li> </ul>	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]