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Mohammad Alaul Islam

Education

- 2019–March 31, 2023 : **PhD, Micro Visualizations for Fitness Trackers**, *Université Paris-Saclay & National Institute for Research in Digital Science and Technology (Inria)*, Saclay, France. I successfully defended my Ph.D. thesis on 16th March 2023.
- Thesis topic : The title of my Ph.D. thesis is- “*Visualizations for Smartwatches and Fitness Trackers*.” My research project aims to study very small data visualizations, micro visualizations in display contexts that can only dedicate minimal rendering space for data representations (e.g., fitness tracking armbands and smartwatches). Given small and complex data, I study the human perception of and interaction with micro visualizations.
- Supervisor : **Dr. Petra Isenberg**, *Research Scientist (CR), Aviz team, Inria, LISN, Université Paris-Saclay, France* (*Personal Web-page*)
- 2018–2019 : **Master’s in Human-Computer Interaction**, *Université Paris-Saclay*, Paris-Saclay, France.
- 2015–2016 : **MSc in Computer Science & Engineering**, *United International University*, Dhaka, Bangladesh.
- 2009–2013 : **BSc in Computer Science & Engineering**, *Ahsanullah University of Science and Technology*, Dhaka, Bangladesh.

Publications

- 2023 **Alaul Islam**, Tingying He, Anastasia Bezerianos, Tanja Blascheck, Bongshin Lee, and Petra Isenberg. Visualizing information on smartwatch faces: A review and design space. In *IEEE Transactions on Visualization and Computer Graphics*, 2023. Under Review.
- 2023 Tanja Blascheck, Lonni Besançon, Anastasia Bezerianos, Bongshin Lee, **Alaul Islam**, Tingying He, and Petra Isenberg. Studies of part-to-whole glanceable visualizations on smartwatch faces. In *PacificVis*, 2023. To Appear.
- 2022 **Alaul Islam**, Lijie Yao, Anastasia Bezerianos, Tanja Blascheck, Tingying He, Bongshin Lee, Romain Vuillemot, and Petra Isenberg. Reflections on Visualization in Motion for Fitness Trackers. In *New Trends in HCI and Sports Workshop held as a part of 24th International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI)*, Vancouver, Canada, 2022. <https://hal.inria.fr/hal-03775633>.
- 2022 **Alaul Islam**, Tanja Blascheck, and Petra Isenberg. Context Specific Visualizations on Smartwatches. In Michael Krone, Simone Lenti, and Johanna Schmidt, editors, *EuroVis 2022 - Posters*. The Eurographics Association, 2022. <https://doi.org/10.2312/evp.20221122>.
- 2022 **Alaul Islam**, Ranjini Aravind, Tanja Blascheck, Anastasia Bezerianos, and Petra Isenberg. Preferences and effectiveness of sleep data visualizations for smartwatches and fitness bands. In *CHI Conference on Human Factors in Computing Systems*. ACM, 2022. <https://doi.org/10.1145/3491102.3501921>.

- 2021 Sheelagh Carpendale, Petra Isenberg, Charles Perin, Tanja Blascheck, Foroozan Daneshzand, **Alaul Islam**, Katherine Currier, Peter Buk, Victor Cheung, Lien Quach, and Laton Vermette. Mobile visualization design: An ideation method to try. In *Mobile Data Visualization*, pages 241–261. Chapman and Hall/CRC, Nov 2021. <https://doi.org/10.1201/9781003090823-8>.
- 2020 **A. Islam**, A. Bezerianos, B. Lee, T. Blascheck, and P. Isenberg. Visualizing information on watch faces: A survey with smartwatch users. In *IEEE Visualization Conference (VIS)*, pages 156–160. IEEE Computer Society Press, 2020. <https://doi.org/10.1109/VIS47514.2020.00038>.

Research Experience

- June 2022 – **Visiting Researcher**, *Interactive Media Lab Dresden*, Dresden University of Technology, Germany,
 July 2022 (*Web page*) I have worked there for two weeks for a collaborative research project on smart-flexible display visualization.
- Advisor : Dr. Raimund Dachselt (Interactive Media Lab Dresden) & Dr. Petra Isenberg (Inria, LISN, Université Paris-Saclay)
- March 2021 – **Supervising a Master's student internship**.
 Aug 2021 Understanding the aesthetic preferences by users for smartwatches data representation.
 Advisor : Dr. Petra Isenberg (Inria, LISN, Université Paris-Saclay)
- March 2019 – **Master's Internship**, *CEA (French Alternative Energies and Atomic Energy Commission) Tech*.
 August 2019 Research and development of 3D point cloud interaction, Working with a team on design, development, and integration of multiple 3D point selection.
 Supervisors : Dr. Louis-Pierre Berge & Radhouene Azzabi (CEA), Prof. Dr. Emmanuel Dubois (IRIT)

Invited Talk

- 2022 **Dresden Talks on Interaction & Visualization**, Title: *Visualizations for Fitness Trackers*.
 In this 45-min talk, I gave an overview of my research work on fitness trackers' visualizations and share my insights on how they can help to enable a more pervasive use of visual data representation. (*More details*)

Honors And Awards

- 2022 **Summer Training Scholarship: Analytics, Data Science & Decision Making Summer School**, *University of Essex, Colchester, England*, 25 July–5 August.
 By attending summer training for two weeks (60 hours of training), I have benefited from learning advanced techniques in data science (e.g., Machine Learning, Federated Machine Learning) and applications (e.g., Brain-Computer Interfaces) including artificial intelligence and statistical methods.
- 2022 **MOMI2022 : Le MOnde des Mathématiques Industrielles/The World of Industrial Mathematics**, *Université Côte d'Azur, Sophia Antipolis, France*.
 The MOMI2022 scholarship program is intended to support students to participate in the workshop in Inria Sophia Antipolis - Méditerranée. I presented a poster and give a talk about my Ph.D. thesis.
- 2021 **IEEE VIS 2021 Doctoral Colloquium (DC)**, *Virtual Conference*.
 The DC application was accepted to present my research work and discuss the dissertation project's challenges and research questions; VIS DC Virtual Conference, October 2021
- 2016 **APNIC 42 Fellowship**, *Colombo, Sri Lanka*.
 Obtained Fellowship of Asia-Pacific Network Information Centre conference (APNIC), APNIC 42–2016. Colombo, Sri Lanka.

Professional Experience

- May 2017 – **Associate Senior Programmer**, *CSL Software Resources Ltd.*, Dhaka, Bangladesh.
 Aug 2018 Developed multiple modules to build Enterprise Resource Planning (ERP) system in the team; Customer requirements analysis, design, front-end, and back-end coding; Working in a team environment following SCRUM/Agile software development methods.

- April 2016 – **Software Engineer**, *National Development Engineers Ltd.*, Dhaka, Bangladesh.
- May 2017 ERP System analysis, design, and development with best software development practice; Database structure planning and design using Microsoft SQL Server; Requirements analysis for new modules and prototyping with team members.
- Feb 2014 – **Web Application Developer**, *Authentic Software*, Dhaka, Bangladesh.
- Feb 2016 UX/UI Design and development for domestic and international clients; Prototyping and developing new techniques for front-end web applications; Experimenting with web-based frameworks and technologies.

Programming Skills

Languages Python, C#, JAVA, Android

Web tools HTML5, PHP, JavaScript, Web API, Three/React/Node JS, d3.js

Database SQL, MySQL

Volunteer Experience

- 2020 – 2021 **PhD students' Representative**, ED-STIC, Pole-B, Université Paris-Saclay.
- 2020 **Event Coordinator**, CARaDOC – Careers and Doctors, Université Paris-Saclay.
- 2020-2021 **Student Volunteer**, IEEE VIS 2020, 2021, Virtual.
- 2022 **Student Volunteer**, EuroVis 2022, Rome, Italy.