Shariff Faleel

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|Research Interests:

Primary research interest is in augmenting human cognition. I am particularly interested in using state-of-the-art artificial intelligence technologies with ubiquitous computing to expand the human day-to-day experience.

|Education:

| **2019 - 2023** **University of Manitoba**
PhD (Computer Science)

Supervisor: Dr. Pourang Irani
GPA: 4.25/4.5

| **2013 - 2017** **University of Peradeniya**
BSc (Computer Science)

Major: Computer Science
Minor: Statistics & Mathematics
GPA: 3.50/4.0 (87%) *(Second Class Honours - Upper Division)*

|Work & Research Experience:

| **Augest 2019 - Present** **PhD Candidate**
University of Manitoba

- Under the supervision of Dr Pourang Irani
- Exploring AR/VR input and output capabilities.
- Interested in applications of smart homes and smart environments.
- Developed Hand Proximate UI as a novel interaction modality for AR/VR.
  - Technologies Explored: Deep learning models (CV), Gesture based interactions (Leap Motion, Vicon motion tracking, CV), VR/AR (Oculus, Epson & Hololens using Unity, Android & Python)

| **July 2017 - Augest 2019** **Research Assistant**
University of Peradeniya

- Under the supervision of Dr R.D. Nawarathna.
- Conducted research on deep learning based computer vision applications as part of an industry collaboration with codegen international.
- Developed a prototype system for a cashier assistant:
  - Tools/framworks used: NVIDIA Jetson, Raspberry Pi, Python, pytorch, django, AWS Lambda, AWS Beanstalk, MongoDB.
  - Framework developed for automated ML experimenting, training and deployment.

| **March 2017 - June 2017** **Temporary Demonstrator**
University of Peradeniya

- Conducted practical sessions (Programming concepts, Data structures and algorithms, Computer architecture/assembly) for undergraduate students.
- Technical committee member of the Postgraduate Institute of Science Research Congress, 2017.
- Conducted research on Dialogue Management systems.

| **Augest 2016 - January 2016** **Software Engineering Intern**
IFS R&D International

- Developed dependency visualization of system modules. Using Common Lisp, Python, and Javascript.

|Additional Information:

Leadership Skills: At St. Anthony's College I played hockey for the U-13, U-15, U-17 and U-19 teams. Held positions as the president of the Islamic Students Movement, chief editor of the Tamil Cultural Society, and also was part of the Interact Club, Global Linking Programme, and Sri Lanka Unites Programme. I also was part of the debate team at the University of Peradeniya and the drama team that took part in the drama competitions within the University.

Languages: English, Tamil (mother tongue), Sinhala

Technical skills: Python (pytorch, flask, django, etc.), C# (Unity), Lisp, Java, C++, C, PHP, Javascript, Matlab, Emacs, etc.

Machine learning and deep learning (experienced in pytorch and tensorflow).

Worked in computer vision, Natural language processing, dialogue systems, development for AR/VR.

Strong communication, collaboration and leadership skills.

Well able to work independently and take initiative when necessary.

Team player and good interpersonal skills.

|Publications:

Shariff A. M. Faleel, Michael Gammon, Kevin Fan, Da-Yuan Huang, Wei Li, and Pourang Irani. 2020. "HPUI: Hand Proximate User Interfaces for Head Mounted Displays" In submission at CHI 2021.

Ali Neshati, Bradley Rey, **Shariff A. M. Faleel**, Sandra Bardot, Celine Latulipe, and Pourang Irani. 2020. "BezelGlide: Interacting with Graphs on Smartwatches with Minimal Screen Occlusion" In submission at CHI 2021.

Shariff A. M. Faleel, Michael Gammon, Yumiko Sakamoto, Carlo Menon, and Pourang Irani. 2020. "User gesture elicitation of common smartphone tasks for hand proximate user interfaces". In *Proceedings of the 11th Augmented Human International Conference (AH '20)*. Association for Computing Machinery, New York, NY, USA, Article 6, 1–8. DOI:https://doi.org/10.1145/3396339.3396363

Yurii Vasylkiv, Ali Neshati, **Shariff A. M. Faleel**, Yumiko Sakamoto, and Pourang Irani. 2020. "Using guessability framework: age-related differences in hand gesture interaction". In *Proceedings of the 11th Augmented Human International Conference (AH '20)*. ACM, New York, NY, USA, Article 24, 1–2. DOI:https://doi.org/10.1145/3396339.3396394

M.F.A. Shariff. and R.D. Nawarathna, “A Novel Dialogue Manager Model for Spoken Dialogue Systems based on User Input Learning” in SLAAI-ICAI-2018.

M.F.A. Shariff. and R.D. Nawarathna, “A Dialogue Management Model with User Input Learning.” Proceedings of the Postgraduate Institute of Science Research Congress 2017. (Abstract)