



AMAL VINCENT

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EDUCATION

Master of Science in Interactive Arts and Technology

Simon Fraser University

September 2017 — Present

Bachelor of Technology, Electronics and Communication Engineering

College of Engineering, Trivandrum
University of Kerala

July 2010 — May 2014

WORK EXPERIENCE

Simon Fraser University

Graduate Teaching/Research assistant

September 2017 — Present

I serve as Research assistant to Dr. Chris Shaw in the BioViz lab at Simon Fraser University.

Teaching experience:

- Teaching Assistantships:
 1. Introduction to Technological systems (IAT 267) with Helmine Serban, spring 2019
 2. Computational Media (IAT 455) with Helmine Serban, fall 2018
 3. Introduction to Technological systems (IAT 267) with Helmine Serban, summer 2018
 4. Introduction to Technological systems (IAT 267) with Helmine Serban, spring 2018
 5. Advanced Human-Computer Interaction (IAT 351) with Dr. Brian Fisher, fall 2017
- Guest Lecture: Interdisciplinary Design Approaches to Computing (IAT 806), fall 2018

Indian Railways

Senior section engineer

December 2015 — July 2017

Electrical general services under South Western Railway at Bengaluru, India

Responsibility in maintaining power supply and electrical assets in good condition

Sardar Vallabhbhai National Institute of Technology, Surat

Research assistant

April 2015 — November 2015

The research project involved developing a gaze estimation technology based on regular laptop web camera and display, for human-computer interaction using image-processing, computer-vision, and machine learning primitives.

PROJECT AND ACTIVITIES

Undergraduate:

- **Projects:**
 - Online voting system powered by biometric security using steganography
 - Home automation using a cellphone.
- **Seminar-** A-eye, Automation of the role of the third umpire in the game of cricket.
- **Extracurricular-** ISTE member, Co-founder, and layout designer for VOYAGE (college newsletter)-<https://www.facebook.com/voyagecet/>

Graduate:

- **Projects**
 - FitViz: Fitbit based web application for monitoring physical activity of arthritis patients
 - SWAPP: Web based application for logging and analyzing sleep related data for children
- **Achievement**
 - Eduhacks 2017, Vancouver (Educational hackathon) second runner up

RESEARCH PUBLICATIONS

- Amal Vincent, Ankit Gupta, Chris Shaw, Ruoyu Li. "Correlation Visualisation for sleep data analytics in SWAPP (Sleep Wake Application)" in Visualization and Data Analysis 2019 (VDA 2019) conference (part of Electronic Imaging (EI) conference 2019, January 13-17)
- Fan, Min & Baishya, Uddipana & McLaren, Elgin-Skye & Antle, Alissa & Sarker, Shubhra & Vincent, Amal. (2018). Block Talks: A Tangible and Augmented Reality Toolkit for Children to Learn Sentence Construction. 1-6. 10.1145/3170427.3188576.
- K. Jariwala, U. Dalal and A. Vincent, "A robust eye gaze estimation using geometric eye features," *2016 Third International Conference on Digital Information Processing, Data Mining, and Wireless Communications (DIPDMWC)*, Moscow, 2016, pp. 142-147.doi: 10.1109/DIPDMWC.2016.7529379

QUALIFICATIONS

Coursera Certifications:

- Digital signal processing from EPFL
- Algorithms design and analysis – 1 from Stanford University
- Cryptography 1 from Stanford University
- Linear Circuits from Georgia Institute of Technology
- Usable security from the University of Maryland
- Hardware security from the University of Maryland
- Image and Video processing from Duke University

Edx certifications:

- Introduction to computer science and programming in python from MIT
- Signals and systems 1 from IIT Bombay

Cybrary certification in cryptography

TCPS 2 Core Research ethics from Panel on Research Ethics, Canada

SOFTWARE AND TECHNICAL SKILLS

- Python
- MATLAB
- C++
- Java/Processing

- Embedded system design
- Web design: HTML, CSS, Javascript
- Ruby on rails

INTERESTS

Technological interests:

- Human-computer interaction
- Signal and image processing
- Computer vision, machine learning
- Cryptography and computer security
- Mathematical and computational thinking

Hobbies:

- Leisure: Reading novels, watching movies
- Sport: Cricket, badminton, carroms, FIFA, DOTA(gaming).
- Art: Playing the harmonica

PERSONAL TRAITS

Optimistic, responsible, team player, ability to adapt easily, good analytical and problem-solving skills, willingness to learn new things and self-learner. Ability to perform consistently and satisfactorily under stressful environment.

REFERENCES

References available upon request.