ZENIN EASA PANTHAKKALAKATH

@ zeninpeasa@gmail.com
github.com/zenineasa
Via Monte Carmen 4, 6900 Lugano
linkedin.com/in/zenineasa
+41 78 233 41 69

EXPERIENCE

Teaching Assistant

Università della Svizzera italiana / ETH Zürich

Feb 2022 – Jan 2023 Lugano, Switzerland

- Supported students in courses on High-Performance Computing (HPC) and graded student projects.

Software Developer

MathWorks

Jun 2018 – Sep 2021 Bangalore, India

- Developed tools for Discrete-Event Simulation and Agent-Based Modeling for MATLAB and Simulink.
- Implemented the Xception Network support package for MATLAB's Deep Learning Toolbox.

PROJECTS

Recent

- **Master thesis**, *Application of Deep and Reinforcement Learning to Boundary Control Problem*; approaching control and optimization problems using policy gradient reinforcement learning and spatio-temporal neural networks. The project was showcased at the PASC23 conference in the form of a poster presentation.
- **HexHoot**, an open-source P2P chat with Zero-Knowledge-Proof authentication, eliminating all centralized servers for communication. All data is stored on user machines and are transmitted to other user machines on request.

Patents

- *System and method for detecting the change in occupancy status of slots over a platform* (IN201731036379); pending.
- *Cryogenic Micromachining Apparatus and Method Thereof* (IN202031020431); pending.

Publications

- Neeraj, Mathew J, Behera RK, Panthakkalakath ZE. *A deep learning framework for covid outbreak prediction*.

Others

- **Smart containers**, Smart kitchen containers that can calculate average nutritional intake, suggest recipes, and notify when one runs out of food. We were finalists in Intel Rapid Prototyping Camp 2017.
- **Driver Suggestion System** for an all terrain vehicle utilizing a wide array of sensors with the data processed using a single-board computer and the output, such as vehicle speed, position, ground clearance and engine temperature, displayed on the phone placed on the dashboard.
- **Alacrity**, a human powered semi-recumbent vehicle. My role was to design and manufacture an aerodynamic fairing for the semi-recumbent bicycle. We participated in Human Powered Vehicle Challenge 2016 conducted by ASME and secured 4th in the Innovation Challenge and 5th in the Design Presentation.

EDUCATION

Master of Science, Computational Science

Università della Svizzera italiana

Sep 2021 – Jul 2023

Bachelor of Technology, Mechanical Engineering

Indian Institute of Technology Patna

Jul 2014 – May 2018

ACHIEVEMENTS

- Two-time runners-up at MathWorks BGL Hackday (2018 and 2020), an annual event where the employees showcase different hacks with MATLAB and Simulink.
- Two-time winner in Capture The Flag (2016 and 2017), an online cybersecurity competition conducted during Anwesha, the annual techno-cultural fest of IIT Patna.
- Finalist in Amazon Code Wizard Challenge (2017), a competition aimed at providing students the opportunity to experience first-hand, the complexity of problems that Amazon deals in its day-to-day operations, and attempt to solve programmatically.

VOLUNTEERING

- **Student Volunteer, PASC23**
  Helped organize the Platform for Advanced Scientific Computing (PASC) conference, an international and interdisciplinary platform for the exchange of knowledge in scientific computing and computational science.
- **Coordinator, Web and App Development, Anwesha '17**
  Sub-coordinator, Creatives and Design, Anwesha '16
  Responsible for managing the website and application development team and hence a part of the Core Committee and Organizing Committee of the annual techno-cultural fest respectively in the years 2017 and 2016.

PROGRAMMING SKILLS

JavaScript
Python
C/C++
MATLAB