Zenin Easa Panthakkalakath

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Career Objective

Highly skilled software developer with expertise in JavaScript, C++ and Python. Experienced in deep learning and reinforcement learning. Proven track record in developing cutting-edge software tools and applications. Strong academic background in computational science and mechanical engineering. Adept at collaborating with cross-functional teams and delivering exceptional results. Eager to contribute my talents to a dynamic software development role.

Work Experience

- **Student Assistant**
  Università della Svizzera italiana [Feb 2022 – Present]
  - Assisted students at Università della Svizzera italiana, Friedrich-Alexander-Universität and ETH Zürich in the *High-Performance Computing* courses.
  - Assisted in updating the course content for *Numerical Computing* course, facilitating a transition from MATLAB to Julia.

- **Senior Associate Engineer**
  MathWorks India Pvt. Ltd. [Jun 2018 – Sep 2021]
  - Developed tools for *Discrete Event Simulation* and *Agent-Based Modeling* using C++ and JavaScript, integrating them with existing products in MATLAB/Simulink.
  - Implemented the Xception Network support package for MATLAB.

- **Summer Intern**
  Vuelogix Technologies [Apr 2017 – Jul 2017]
  - Implemented a system using deep neural networks to detect people wearing helmets inside ATMs using transfer learning on YOLOv2.
  - Developed a React Native App to assist field agents in setting up security devices in ATMs.

- **Summer Intern**
  Forthcode Technologies [Apr 2016 – Jun 2016]
  - Implemented an adaptive search program based on phonetic similarity and user choice history for queries.

Patents filed

- Cryogenic Micromachining Apparatus and Method Thereof (IN202031020431) [May 2020]
- System and method for detecting the change in occupancy status of slots over a platform (IN201731036379) [Dec 2017]

Hobbies and Interests

- Sports and games: Football, chess, hiking.
- Cooking: Making experimental dishes.

Education

- **Master of Science in Computational Science**
  Università della Svizzera italiana [2021 – 2023]
- **Bachelor of Technology in Mechanical Engineering**
  Indian Institute of Technology Patna [2014 – 2018]

Publications

- **Application of deep and reinforcement learning to boundary control problems [2023]** Under review
  github.com/zenineasa/MasterThesis
- **A deep learning framework for COVID outbreak prediction [2020]** arxiv.org/abs/2010.00382

Projects

- **HexHoot** - Opensource P2P communication with ZKP authentication [Aug 2022] hexhoot.com
- **Tool-Workpiece Contact Switch for Micromilling Machine** [Jun 2017 – May 2018] tinyurl.com/59brdhwe
- **Smart containers 2.0.** [Oct 2017] youtu.be/g5njrmDuBlo
- **Driver Suggestion System** - Queen, All Terrain Vehicle [Nov 2016 – Jan 2017] youtu.be/dvBhNqm9kyc
- **Alacrity** - Human Powered Semi-recumbent Vehicle [Apr 2015 – Mar 2016]

Honours and Awards

- Runners up in MathWorks BGL Virtual Hackday [Dec 2020]
- Runners up in MathWorks BGL Hackday [Nov 2018]
- First place in Capture The Flag Anwesha '17 [Jan 2017]
- Finalist in Amazon Code Wizard Challenge [Apr 2017]
- First place in Capture The Flag Anwesha '16 [Jan 2016]

Volunteering

- Student Volunteer, PASC23 [Jun 2023 – Jun 2023]
- Coordinator, Web and App Development, Anwesha '17 [Mar 2016 – Jan 2017]
- Sub-coordinator, Creatives and Design, Anwesha'16 [Mar 2015 – Jan 2016]
- Member, National Service Scheme [Jul 2014 - May 2018]