RAMANAYAKE ARACHCHIGE DONA CHETHANA AKARSHANI

Bsc. (Hons) Artificial Intelligence and Data Science

Date of birth: 20/08/2000 | phone number: 0719993444 | Instagram: akarshani_r

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Experience

Assistant lecturer (Full-time)
Aug 2024- Present
Informatics Institute of Technology

Assigned to do tutorials on computer systems fundamentals, programming fundamentals, database systems, designs and implementation, and Computer vision.

Founder and software engineer (Part-time)
May 2024- Present
NetLink Technologies

Evaluate overall software solutions based on the requirements of the client. Building the Software solution along with the team.
- Python / WordPress / SQL / Figma

Associate software engineer (Full time)
Jun 2023- Jun 2024
TurboGen Consultancy (Pvt) Ltd

Developed major features in TurboTides simulation software and assisted application engineers in finding algorithmic solutions and solving complex mathematical problems related to 3D and 2D geometry generation. Identify and address performance bottlenecks in the software by employing profiling and optimization techniques under the guidance of senior developers.
- C++ / QT / Open Cascade Technology / Advanced Mathematics / Algorithms / Data structures / Statistics

Junior software engineer(Intern full time)
Jun 2022 - Jun 2023
TurboGen Consultancy (Pvt) Ltd
Implemented and improved algorithms to further enhance the robustness of existing algorithms and troubleshoot and resolve the bugs reported by users in 3D and 2D geometry-related tasks, Built GUI for parameter handling and 2D plotting.
- C++ / QT / Open cascade technology / HTML /CSS/ Mathematics / Algorithms / Data structures

Education

Bsc.(Hons) Artificial Intelligence and Data Science
Sep 2021- Sep 2024
Robert Gorden University, Scotland, UK.

Bachelor of science with honors in Artificial Intelligence and Data Science with First class honors.

G.C.E Advanced level examination (physical stream / 2019) | G.C.E Ordinary level examination
Sirimavo Bandaranaikee Vidyalaya, Colombo 07, Sri Lanka.

Languages

SINHALA   ENGLISH

Skills

Hard skills: Python, C/C++, R, JavaScript, SQL, Arduino, HTML, JavaScript, R-Studio, Power BI, PyTorch, TensorFlow, OpenCV, PyQt, QT/C++, OpenGL, and Open cascade technology / Wordpress.

Data Science: ML, DL, Optimization techniques, Computer vision, Edge AI, Signal processing, Simulation and modeling techniques, Data analysis, Data Engineering

Soft skills: Presentation skills, Public speaking, Analytical and research skills, Decision making, Project management, Problem-solving, Time management, Team work

Projects

PARSEC airfoil parameter optimization: **Genetic Algorithm / ANN / Game theory (Nash equilibrium)** / **pyQT** / **tensoflow** / **python**
The lift-to-drag ratio of an aerofoil shape of airplane wings generated with the PARSEC parameterization method was optimized using genetic algorithms.

Implicit 3D scene reconstruction towards efficient collision understanding in autonomous driving: **Deep Neural Network / Implicit 3D reconstruction** / **pyQT** / **pytorch** / **python**
Reconstruct the implicit 3D form of obstacle scene maps with continuous sign distance function field using DNN from acquired point clouds of the LIDAR sensor.

A smart home system that has optimal power control: **Edge AI / Computer vision / Arduino / ANN Firebase, React** / **C++**
This classifies each registered individual and sets up predicted optimal values for temperature, Fan speed, and light Intensity according to person.

Brain tumor Detection with explainable AI (Med-X): **Computer vision / Explainable AI / NLP /Tensorflow /HTML / CSS / Javascript**
Med-X extracts brain tumor type from brain MRI images and brain tumor location. Uses LIME to add more interpretability for vision models. Includes GPT 3.5 fine-tuned with previous brain tumor case studies.

Awards

3rd place in the PROJEXPO Artificial Intelligence and Data Science Research and Development category.
Awarded at the Cutting Edge '24 Exhibition organized by Informatics Institute of Technology
09th July 2024

Extra curricular

Projects competition and Ideathon avenue lead (Cutting Edge '24 Exhibition organized by Informatics Institue of Technology)
2024 Jun

Professional Development Director (Rotaract Club of IIT)
2021 - 2022

Senior Prefect | Treasurer of the Astronomical Club | Secretary of Electronic Club | Vice President of Saukyadhana Society | House Vice Secretary (Sirimavo Bandaranaike Vidyalaya)
2018–2019

References

Prof. Nihal Kodikara (Project supervisor)
Head of Department (School of Computing) at Informatics Institute of Technology
Email: nihal.k@iit.ac.lk | phone number: 0761490879

Mr. Vinojan Thiyagarash (Internship supervisor)
Tech Lead (Turbogen consultancy (PVT) ltd.)
Email: vinojan@trbogen.com | Phone number: 0777277220