

Sandil Ranasinghe

Computer Science & Engineering Student | Full Stack Developer with over 5 years of experience | Currently taking an interest in Deep Learning and related applications.

CONTACT DETAILS

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WORK EXPERIENCE

Ruach Holdings (lk) - Consultant Software Developer (Part time)

Aug 2024 - Nov 2024

Adapting existing codebase of a framework for a new web application prototype. I was responsible for initial containerisation, dev server deployment as well as designing DB extensions, logical flow and implementing API endpoints for new modules added.

University of Moratuwa - Teaching Assistant

May 2024 - Dec 2024

Conducted lab sessions and evaluated quizzes/labs for semester 3 Operating Systems module.

H2O.ai (APAC) - Data Science Intern

Nov 2023 - Aug 2024

Developed GenAI-based applications using H2O.ai's h2oGPTe RAG system and h2o Wave application framework to solve real-world business problems. Experienced in fine-tuning prompts and utilizing large language models (LLMs) for tasks such as context-based question generation and semantic similarity evaluations for content benchmarking. Received exposure to coding web applications with a focus on error handling and concurrency for performance optimization.

IFS x Hatch ChallengerX - Machine Learning Incubator Program

Dec 2022 - May 2023

Part of a 4 member team selected for the program from dozens of teams across multiple universities. We received the opportunity to meet and be mentored by industry leaders. (<https://ifs-challengerx.hatch.lk/>)

GOOGLE SUMMER OF CODE 2022 - Contributor at Wagtail CMS

May 2022 - Sep 2022

Main changes merged into open source CMS Wagtail while additional features are maintained as a separate package. Received mentoring by experienced developers, gaining valuable insights into coding best practices alongside technological expertise. (Wagtail/Django/Python)

FREELANCE - Full Stack Developer

Setting up Moodle LMS for <https://cjmaths.lk/> | AI-powered resume review application for The Job Helpers | Assisting postgraduate/research students with code/script parts of projects (Web/ML) | Web Scraping project for Avonov Global

STACK TECHNOLOGIES - Intern Full Stack Developer

Sep 2019 - Aug 2021

Received training and then worked as a full stack developer, utilizing widely used frameworks such as React and Django. Projects worked on: SLTB citybus app (main developer for initial version, app available on playstore) | DSI planning software (creating models and handling logic at API, querying and visualizing data) | Dealer management software for Zigo

PROJECTS

Temporal Data Driven Efficient Diffusion (FYP) (ongoing)

Research into data efficient diffusion using 1D data, with a focus on adopting Neural Processes (Gaussian Processes). We adapted architectures in existing literature to model ECG data and are currently researching to make a novel addition.

Disaster Analysis and Response Tool (ChallengerX)

An AI/ML system leveraging geo-spatial data to model damage to customer assets by natural disasters. My primary responsibility involved designing and implementing a Machine Learning pipeline.

Wagtail Streamfield Migration Toolkit (GSoC)

<https://summerofcode.withgoogle.com/programs/2022/projects/It13tsEg>

Skills Upscale Program (CSE 20)

A series of knowledge sharing sessions on frameworks/tools. I coordinated the student/industry sessions and also conducted sessions on topics such as optimizing queries using PostgreSQL, CSS animation effects, preparing for the ML interview etc.

MoraUXplore Website (2023)

Official portal for the competition. I was responsible for containerising and deploying the website and services on a DO droplet server and configuring DNS records etc.

Borrowhub

An application for sharing community goods. My contributions included making a CD pipeline and maintaining code quality in the backend.

Speech Olympiad Website (XV)

Codeveloper for the Speech Olympiad website.

5G Energy Consumption Modeling (Semester 5 Project)

Modeling and predicting energy usage for 5G network stations

DebateTracker

Application for tracking tournament data developed by a fellow debater. I revamped the front-end UI using MUI.

CERTIFICATIONS

- **Deep Learning Specialization** on Coursera by DeepLearning.AI (5 course specialization) (2020)
- **Large Language Models - Level 3** by H2O.ai (2024)
- **Machine Learning for Natural Language Processing** by AWS Academy
- **Python3** (2020) | **Javascript** (2020) by Sololearn.

STACK

- **Programming Languages** - Python | JavaScript | C | C++ | Java | Lua
- **Web Development** - FastAPI | HTML | CSS | React | Vue | Django | h2o wave | Wagtail | Selenium
- **Database Systems** - SQL | PostgreSQL | MongoDB
- **Machine Learning** - PyTorch | Scikit-Learn | Pandas | Numpy | LangChain | h2oGPTe | h2o DAI
- **Mobile Development** - React Native | Solar2D
- **Tools** - Git | Linux | VSCode | Docker

EDUCATION

UNIVERSITY OF MORATUWA - Bsc. Eng. (Hons) Computer Science & Engineering 2021 - 2025

- **Minor in Mathematics**
- **Student Representative** (CSE Department) for the semesters 7 and 8
- Member of the Gavel Club of UoM , **Webmaster 2023/2024**
- Member of the Mathematics Society of UoM, committee member 2021/2022
- Part of official app development team for EXMO 2023 exhibition organized by UoM
- Part of team creating questions for MoraXtreme 7.0 programming competition
- Part of Careers Fair 25 Website development team

ROYAL COLLEGE, COLOMBO 07 - GCE AL 2011 - 2019

- GCE AL Mathematics Stream - 3As - (Maths, Physics, Chemistry)
- Member of the English Debaters Council of Royal College (2015 to 2018), **Treasurer 2016/2017**
- Member of the Gavel Club of Royal College (2011 to 2018), **Vice President 2017/2018**

ACHIEVEMENTS

Programming/Data Science

- Ranked 3 in SL / 112 world rank at IEEEExtreme 17.0 (2023)
- Ranked 2 in SL / 129 world rank at IEEEExtreme 16.0 (2022)
- Champions at Bashaway Scripting and Automation Competition (2023) by SLIIT.
- Runners up at RootCode Tech-Triathlon (2023) Design, Hackathon and Datathon organized by RootCode.
- Runners up at ChallengerX ML Incubator program by Hatch x IFS.
- Runners up at Datastorm 4.0 (2023), data science and analytics competition.
- Semi-Finalist at Datastorm 3.0 (2022), data science and analytics competition.
- Top 7 Finalist at Asia Pacific Advanced Network (APAN56) Datathon.
- Finalist at Code Squad 3.0 Programming Competition.
- Problem Solving, Python, SQL gold badges on Hackerrank.

Mathematics

- Honorable Mention at the 58th International Mathematics Olympiad. (Brazil 2017)
- Participated in the 56th International Mathematics Olympiad. (Thailand 2015)
- Awarded a Bronze Medal (under 17 category) at the IMC in China 2015.
- High Distinction at the Sri Lankan Mathematical Olympiad in years 2013, 2014, 2015, 2016, 2017.

Debating

- DC endorsed Judge for the local debating circuit.
- Winners at Hulftsdorp Inter University Debating Championship 2023 organized by the Law College of Sri Lanka.
- Participated in the Asia World Schools Debating Championship in Thailand 2016.
- Winners at DC League 2017/2018 organized by the Debaters Council of Sri Lanka.
- Selected for the national debaters pool in 2017.