Dinuka Amarasinghe

✉ dinukaamarasinghe817@gmail.com

github.com/dinukaamarasinghe817

in linkedin.com/in/dinuka-amarasinghe/

📞 +94 714 872852

About Me

I am a final year undergraduate at UCSC, with a deep passion for technology and problem-solving. I constantly seek new challenges and enjoy embracing innovation. Eager to learn and grow in every opportunity that comes my way.

Education

2021 – present	🎓 **B.Sc. (Hons) in Computer Science** University of Colombo School of Computing. GPA: 3.92
2016 – 2019	🎓 **GCE A/L in Physical Science Stream** D.S.Senanayake College, Colombo 07 Physics: A, Combined Mathematics: B, Chemistry: B Z-score: 1.7755

Experience

2024 💻 **Phinexa**

2024 June - 2024 November

Worked at as a software engineer (part time)

- Developed the business website for Phinexa using React JS, improving user experience and functionality.
- Built a mobile healthcare application using Flutter for managing and tracking children's healthcare data.
- Developed a data collection application and its corresponding admin interface using React JS for a client provides CV preparation services.
- Developed the business website for an organization in the education domain.

2023 - 2024 💻 **WSO2 LLC**

2023 November - 2024 May

Worked at as a software engineer intern

- Developed Redis DB support for the Ballerina Persist module, enabling database operations and schema flexibility with Redis as a primary database and cache.
- Implemented PGP encryption and decryption in the Ballerina crypto module for secure data handling.

Skills

Languages	❯	Strong reading, writing and speaking competencies for English.
Programming	❯	Ballerina, Java, Dart, C++, C, C#, Python, PHP, R, Scala
Frameworks	❯	ASP.NET, Flutter, ReactJs, Tailwind
Databases	❯	Redis, MySql, MongoDB
Other	❯	Academic research, Tutoring

Projects

Redis DB support for bal persist

Contributed to the implementation of Redis DB support for the bal persist feature. Developed a generic client for Redis to perform basic database operations and automated the generation of specific client code for user-defined models. Integrated Redis as both a primary database and a caching database to co-exists with other primary databases, enabling efficient caching solutions to be developed using Ballerina.

Github - ⬤   Developer guide - ▶   Blog article - Ⓜ

Ayura - A personal health mobile application

Led the development of a mobile app for personal health management, turning daily activities into fitness challenges with leaderboards. Developed the backend architecture using ASP.NET Core and contributed to the mobile application development with Flutter. Integrated Google Fitness for activity tracking and data syncing

Github - ⬤

Gasify - An online LP Gas reservation system

Led the development of an innovative online LP gas reservation system that automated the entire gas reservation, delivery, and distribution process. Implemented a smart algorithm optimized distribution, suggesting cost-efficient delivery vehicles and identifying the most profitable routes. The system was built from scratch without any frameworks using PHP with MVC architecture.

Github - ⬤

Research

Improving isolation of multi unikernel systems

- Investigating improved isolation mechanisms in unikernels by adopting microkernel architecture, leveraging Rump Unikernel and seL4 for enhanced security.
- Aiming to achieve formal verification of the improved isolation, utilizing seL4 as the foundation for mathematically proven correctness

Competitions

Merit Award - NBQSA 2023

Project Ayura (A personalized health application)

- Received a Merit Award under the Tertiary Student Project category in the Business division at NBQSA in 2023.

Finalist - Tech-Triathlon 2024

Project CeylonScapes (A toursim application for Sri Lanka)

- Tech-Triathlon is a competition organized by Rootcode, which consists of 3 phases: Designathon, Buildathon, and a datathon.
- Developed the mobile application using Flutter.

Competitions continue...

Champions - Opehhack 2.0
- Opehhack is a problem solving competition organized by Mozilla campus club and FOSS community of IIT.

1nd Runner-up - PyHack 2.0
- PyHack is a problem solving competition organized by IEEE WIE Afinity Group of IIT.

2nd Runner-up - Cypher
- Cypher is a problem solving competition organized by IEEE WIE Student Branch Affinity group of KDU.

Finalist - RealHack 4.0
Project Care Wave (A doctor appointment booking application)
- RealHack is a competition organized by IEEE Student Branch University of Kelaniya
- Consisting of two phases: problem solving and a developent phase.
- Developed the front end using php with MVC architecture

Finalist - ReidXtream 2021
- ReidXtream is a problem solving competition organized by IEEE Student branch of University of Colombo School of Computing.

Finalist - CodeFest CTF 2022
- PyHack is a capture the flag competition organized by Cyber Security Community of SLIIT.

Participant - IEEXtreame 17
- Secured 28th rank in Sri Lanka

Commities

▸ **Peo Code**
  › Former lead of competitive programming team

References

Mr. Danesh Kuruppu
Technical Lead
WSO**2** LLC
danesh@wso2.com

Mr. Rangana Amaraweera
Lecturer
University of Colombo School of Computing
rja@ucsc.cmb.ac.lk