

# Deera Wijesundara

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## Summary

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As a passionate software engineer and competitive programmer, I have won almost all major national ICT and algorithmic championships in Sri Lanka, from the NOI to a three-peat at the NSSC. I focus on bridging C++ algorithmic theory with modern systems engineering in Rust and Python to build highly optimized, high-performance software.

### Peak Ranked 1st Nationally on LeetCode, Codeforces, and AtCoder

*(Currently ranked in the top 3 nationally across all three major elite competitive programming platforms)*

## National ICT Championship (Current 3-Time Champion)

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**National School Software Competition (NSSC), National Champion (1st Place)** 2023 – 2025

- Achieved an unprecedented three-peat as National Champion at the premier competitive programming and ICT championship organized by the Ministry of Education and CSSL (Computer Society of Sri Lanka)

## Competitive Programming & Olympiads

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**International Olympiad in Informatics (IOI), National Team Member** 2024 – 2025

- Represented Sri Lanka for two consecutive years (Egypt 2024, Bolivia 2025) in the world's premier high-school algorithmic programming competition

**National Olympiad in Informatics (NOI), National Champion (1st Place)** 2024 – 2025

- Clinched 1st place in 2025 to become the National Competitive Programming Champion with a historic perfect score of 600/600 (with a ~150 point lead over 2nd place), following a 2nd place finish in 2024

**Asia Pacific Informatics Olympiad (APIO), Bronze Medalist** 2024

- Awarded a Bronze Medal in competitive programming, securing Sri Lanka's first APIO medal in 15 years

## Software Engineering & Systems Architecture

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### C++ Algorithms & Data Structures Library

- Authored and maintained an extensive competitive programming library featuring advanced data structures (including Lazy Propagated Implicit Treaps and Dynamic Segment Trees, Sqrt Trees, Fenwick Trees, Union Finds ...), utilized by many national level players

**Scrabble Study Toolkit** words.deera.dev

- Developed a sleek and elegant frontend interface serving as a highly efficient memory recall tool, personally utilized by elite players including the current North-Western provincial champion
- Engineered a high-performance backend probability engine in Rust, utilizing a hybrid evaluation model that simulates rack permutations and analyzes over 1 million ai played games

**Official Maliyadeva College Website** maliyadeva.lk

- Directed backend development and DevOps using a custom Python CMS, while co-developing a NextJS frontend and independently managing DNS and Linux VPS deployment

**AI-Driven Python Learning Platform** python.lk

- Developed a personalized, in-browser code execution playground integrating advanced LLM architecture to provide students with real-time, dynamic code feedback and automated tutoring

### Sri Lankan Online Judge (Work In Progress)

- Architecting a horizontally scalable competitive programming platform with a dual Python/Rust backend engineered for peak loads of 100+ submissions per second across isolated, low-latency execution environments for 200+ languages

## Research & Cybersecurity

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**Fellow, Non-Trivial Fellowship** Feb 2025 – Aug 2025 & Feb 2026 – Present

- Selected from over 6,000 global applicants as one of ~500 fellows for an intensive high-school research foundations program aimed at leading impactful research
- One of the only high school students selected from Sri Lanka

## Clinical Research Software Development

2024

- Developed a comprehensive, bilingual web-based diagnostic interface for the SNAP-IV rating scale, streamlining critical digital data collection
- Facilitated backend infrastructure for a research article officially published in the Asian Journal of Psychiatry and formally recognized by the Mental Health Portal of the University of Kelaniya

## Cybersecurity Vulnerability Research

2023 – 2024

- Conducted independent security audits and responsibly identified a critical authentication bypass in a major educational platform, protecting over 20,000 paying users from unauthorized access
- Discovered and reported a severe IDOR vulnerability that leaked sensitive payment receipts across a network of 80+ websites, securing the data of 150,000+ combined users

## Hackathons & Team Competitions

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### First Place, Inter-School IT Championships

2024

- Captained the school team to overall 1st place victories at SLIIT Codefest 2024, Royal College BTUI 2024 (including 1st in algorithms), and Ananda College PULZ 2024

### Overall Best Performing School, BCI Codemize

2023 – 2025

- Led the school team to become the best overall performing institution for 3 consecutive years (1st in 2024, 2nd in 2025, 3rd in 2023) against 50+ major schools, competing in Programming, Robotics, Networking, and Web Development to win a combined 400k+ in prizes.

### Winner (1st Place), Moratuwa University CodeJam CTF

2024

- Secured 1st place in the school-level Cybersecurity Capture The Flag (CTF) and achieved 4th place overall across the entire Moratuwa University CodeJam event

## Leadership & Mentorship

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### President, Maliyadeva College IT Society

2025 – 2026

- Spearheaded school-wide technical initiatives, engineered a low-latency buzzer system utilizing existing WiFi networks and mobile devices, and managed extensive DevOps for the 2025 Science Day
- Conducted intensive algorithmic training sessions, directly resulting in Maliyadeva College securing 3 of the top 10 national spots at the National Informatics Olympiad

### Captain & Tournament Director, Maliyadeva College Scrabble

2022 – 2026

- Ranked as an Island Top 10 player and former North-Western Province Champion
- Revived the school club, mentored junior players to dominate provincial championships for 3 consecutive years, and organized a 120-student North-Western Province scrabble tournament

## Education

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### Maliyadeva College

2026

- Studying in the Physical Science Stream (Mathematics, Chemistry, Physics) for A-Levels
- Achieved 9 'A' grades for O-Levels (including Commerce, English Literature, and ICT)

### Ministry of Education – Subhaga Scholarship Recipient

2025 – 2026

- Awarded the scholarship by achieving the highest accumulated points in the North-Western Province, comprehensively evaluating education, sports, and extra-curricular dominance

### BCS, The Chartered Institute for IT – Diploma in IT

2024

- Completed specialized modules including Object-Oriented Programming (OOP), IT Project Management, Systems Analysis and Design, and Professional Issues in IS Practice

### Cambridge English – Certificate in Advanced English

2023

- Achieved C2 Level with Distinction (Overall Score: 203/210), demonstrating native-level proficiency

## Skills

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**Core Competencies:** Competitive Programming, Advanced Data Structures & Algorithms, Cybersecurity, Networking

**Languages:** C++ (Primary for Competitive Programming), Rust, Python, SQL, JavaScript, HTML/CSS

**Frameworks & Web:** Svelte, NextJS, Custom Python CMS Architecture

**Infrastructure & Tools:** Linux (7+ years daily driver), Git, Bash, fish shell, VPS Deployment, DNS Management