

# RASHMIKA DE SILVA

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## INTERESTS

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|--------------------------------|------------------|
| · Number Theory                | Abstract Algebra |
| · Theoretical Computer Science | Cryptography     |

## EDUCATION

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| <b>University of Peradeniya</b><br>Undergraduate in BSc. Computer Engineering(Hons.)                                                                                         | <i>2017 Nov - Present</i><br><b>GPA: 3.20/4.00</b> |
| <b>Mahanama College, Colombo - 03</b><br>G.C.E. Advanced Level Examination<br>District Rank - 268, Island Rank - 968<br>Physics (B), Chemistry (A), Combined Mathematics (A) | <i>2008 - 2016</i><br><b>Z-Score: 1.8815</b>       |
| G.C.E. Ordinary Level Examination<br>8 A's & 1 B                                                                                                                             |                                                    |
| <b>Prince of Wales College, Moratuwa</b>                                                                                                                                     | <i>2003 - 2007</i>                                 |

## SKILLS

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|-------------------------------------|------------------------------------------|
| <b>Programming Languages</b>        | C, Java, Python                          |
| <b>Procedural Programming</b>       | ARM Assembly                             |
| <b>Hardware Programming</b>         | Verilog HDL, Arduino C                   |
| <b>Numerical Computing Packages</b> | MATLAB, Numpy                            |
| <b>3D Modelling</b>                 | Fusion 360                               |
| <b>Computational Mathematics</b>    | Numerical Analysis, Discrete Mathematics |
| <b>Operating Systems</b>            | Linux, Microsoft Windows                 |
| <b>Languages</b>                    | English, Sinhalese                       |

## RELATED COURSE WORK

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**Reading Course in Number Theory**  
Reference Book - Burton D.M. (2012). *Elementary Number Theory*. McGraw Hill Education (Pvt)Ltd.

**Reading Course in Abstract Algebra - Ongoing**  
Reference Book - Artin M. (2012). *Abstract Algebra*. PHI Learning (Pvt)Ltd.

**Reading Course in Real Analysis - Ongoing**  
Reference Book - Tao T. (2006). *Analysis I*. Hindusthan Book Agency (Pvt)Ltd.

## ACHIEVEMENTS

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|------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>ACES Hackathon</b><br>Project - Mobile Application That Generates Safe Escape Routes During a Flood<br>Finalists    | 2019      |
| <b>SL EXSTO Awards</b><br>Project - Mobile Application That Generates Safe Escape Routes During a Flood<br>Merit Award | 2019      |
| <b>SLIIT Overnight Hackathon</b><br>Finalists                                                                          | 2019      |
| <b>Sri Lanka Physics Olympiad</b><br>Participation                                                                     | 2016      |
| <b>Australian National Chemistry Quiz</b><br>Higher Distinction                                                        | 2015      |
| <b>Sri Lanka Mathematics Olympiad</b><br>Participation                                                                 | 2014/2015 |
| <b>Mathematics Quiz Competition</b><br>Organized by Dept. of Mathematics, University of Colombo<br>Participation       | 2013      |

## PROJECTS

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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Smart Pharmaceutical Warehouse Management System</b><br>· IoT Based Smart Warehouse Management System with Collaborative Mobile Robots.<br>· <i>Technologies: C, Python, MQTT, JavaScript</i><br>· <i>Techniques: Graph Theory, Scheduling Theory, Industrial Automation</i>                                                                            | Ongoing   |
| <b>CPU Implementation with Memory Management</b><br>· An Implementation of ALU, Registers, Program Memory, Cache And RAM<br>· <i>Technologies: Verilog HDL</i><br>· <i>Techniques: Behavioural Modeling, Harvard Architecture</i>                                                                                                                          | 2020      |
| <b>Escape Routes Generating System During A Flood</b><br>· Mobile Application That Generates Safe Escape Routes During a Flood<br>· <i>Technologies: Python, Flutter, FireBase, Google Map API</i><br>· <i>Techniques: Graph Theory, Wireless Communication</i>                                                                                            | 2019      |
| <b>Programmable 8 - bit Computer</b><br>· Logic Gate Level Implementation of 8 - bit Computer<br>· <i>Technologies: Electronics</i>                                                                                                                                                                                                                        | 2019      |
| <b>Various Other Course Projects</b><br>· Analog Line Follower (PD Controller based), Multi Threaded Fractal Visualizer Using Java, Multi Threaded Socket Server Using Java, Speaker Identification Program with Basic Signal Processing<br>· <i>Technologies: Socket Programming, Analog and Digital Electronics, Signal Processing, Embedded Systems</i> | 2018-2021 |

## CERTIFICATES

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**Diploma in Software Engineering (Pearson Assured)**

*2017*

Issued by : ESOF Metro Campus

## TEACHING EXPERIENCE

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CO325 - Computer and Network Security

*2021 - Present*

## EXTRA-CIRRICULAR

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Member of the Association of Computer Engineering Students (ACES)

*2018 - Present*

Committee Member of The Science Society of Mahanama College Colombo - 03

*2015 - 2016*

Member of the Astronomy Society of Mahanama College Colombo - 03

*2015 - 2016*

Member of Quiz Team of Mahanama College Colombo - 03

*2014 - 2016*

Member of the Mahanama College Literary Association

*2011 - 2013*

## OTHER INTERESTS AND HOBBIES

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Motorsports Enthusiast (Formula 1, Formula 2)

## REFERENCES

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**Prof. Roshan G. Ragel**

Professor, Dept. of Computer Engineering

University of Peradeniya

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**Dr. Isuru Nawinne**

Senior Lecturer, Dept. of Computer Engineering

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