

# 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> Undergraduate in BSc. Computer Engineering(Hons.)	<i>2017 Nov - Present</i> <b>GPA: 3.13/4.00</b>
<b>Mahanama College, Colombo - 03</b> G.C.E. Advanced Level Examination District Rank - 268, Island Rank - 968 Physics (B), Chemistry (A), Combined Mathematics (A)	<i>2008 - 2016</i> <b>Z-Score: 1.8815</b>
G.C.E. Ordinary Level Examination 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> Project - Mobile Application That Generates Safe Escape Routes During a Flood Finalists	2019
<b>SL EXSTO Awards</b> Project - Mobile Application That Generates Safe Escape Routes During a Flood Merit Award	2019
<b>SLIIT Overnight Hackathon</b> Finalists	2019
<b>Sri Lanka Physics Olympiad</b> Participation	2016
<b>Australian National Chemistry Quiz</b> Higher Distinction	2015
<b>Sri Lanka Mathematics Olympiad</b> Participation	2014/2015
<b>Mathematics Quiz Competition</b> Organized by Dept. of Mathematics, University of Colombo Participation	2013

## PROJECTS

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<b>Smart Pharmaceutical Warehouse Management System</b> · IoT Based Smart Warehouse Management System with Collaborative Mobile Robots. · <i>Technologies: C, Python, MQTT, JavaScript</i> · <i>Techniques: Graph Theory, Scheduling Theory, Industrial Automation</i>	Ongoing
<b>CPU Implementation with Memory Management</b> · An Implementation of ALU, Registers, Program Memory, Cache And RAM · <i>Technologies: Verilog HDL</i> · <i>Techniques: Behavioural Modeling, Harvard Architecture</i>	2020
<b>Escape Routes Generating System During A Flood</b> · Mobile Application That Generates Safe Escape Routes During a Flood · <i>Technologies: Python, Flutter, FireBase, Google Map API</i> · <i>Techniques: Graph Theory, Wireless Communication</i>	2019
<b>Programmable 8 - bit Computer</b> · Logic Gate Level Implementation of 8 - bit Computer · <i>Technologies: Electronics</i>	2019
<b>Various Other Course Projects</b> · 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 · <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

## **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 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)