

# Tharushi Kamalika Jayasekara

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## Education

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<b>Cornell, Maryland, Max Planck Pre-doctoral Research School</b>	2022
Max Planck Institute for Software Systems, Germany	
<b>Bachelor of Science Honours in Computer Science</b>	2017-2022
University of Colombo School of Computing (UCSC), Sri Lanka	
GPA - 3.98	Batch Rank - 1st/ 160
IELTS - 8.0	
Natural Language Processing - A+	Mathematical Methods - A
Final Year Research in CS - A	Research Methods - A
<b>Primary and Secondary Education</b>	2001-2015
Musaeus College, Colombo 07	
GCE Advanced Level Exam 2015	
Z-score - 2.23	Rank - Country-wide 4th place in Combined Math, Physics, ICT

## Research Publications

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**A Comprehensive Analysis of Aspect-Oriented Suggestion Extraction from Online Reviews**  
*T.K. Jayasekara, A. R. Weerasinghe, W. V. Welgama* 2022  
Deep Learning Applications, Volume 4 - Springer

**Aspect Oriented Suggestion Extraction from Online Reviews**  
*T.K. Jayasekara, A. R. Weerasinghe, W. V. Welgama* 2021  
20th IEEE International Conference on Machine Learning and Applications (ICMLA) 2021

○ Introduced a novel task decomposition to identify product improvements, which proved to be very effective in determining suggestions from non-suggestions, achieving an **F-score of 91%** with BERT pre-trained language model, outperforming state-of-the-art methods on suggestion mining.

## Experience

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### Software Engineer, WSO2 Inc.

*Research and Development (R&D) Team*

*May 2021 - Present*

○ Developing language server features such as completions, code actions, signature help, hover, rename in Java for the compiler backend of Ballerina Programming Language.

### Outreachy Intern at the Open Information Security Foundation (OISF), USA

*Project: Improving Python tools for Suricata*

*Dec 2020 - Feb 2021*

- Improved Python tools for Suricata, an open source network threat detection engine.
- Implemented parallel tests capability which reduced the running time from 88s to 45s.

### Software Engineer Intern, WSO2 Inc.

*Project: Smart Syntax Highlighter for Ballerina Programming Language*

*Sep 2019 - Jan 2020*

- Developed a semantic syntax highlighter for Ballerina, a cloud native programming language.
- Participated at the Ballerina MIT IAP Program 2020

## Awards

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### Academic

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- Awarded the **ICT Student Award in Undergraduate Category** at the Computer Society of Sri Lanka (CSSL) National ICT Awards 2022 **among CS undergraduates in Sri Lanka**.
- Awarded **Student of the Year Award 2020** for excellence in academics, sports, aesthetic and cultural, leadership, conduct and character from **over 2000 students** at University of Colombo.
- Awarded **Prof. Mohan Munasinghe Award in Computer Science 2020** for achieving the **highest GPA (3.98/ 4.0)** in the Computer Science degree programme from 160 students.
- Awarded **Prof. V. K. Samaranayake Memorial Medal 2020** for the Most Outstanding Graduate of the UCSC awarded out of 400 students.
- Awarded **Grace Hopper Scholarship 2020** by AnitaB.org to attend Grace Hopper Celebration, world's largest gathering of women in computing in USA, as one of the 100 international scholars.
- Awarded **Google APAC Women Techmakers' Scholarship 2019** given to **75 out of 25,000 applicants** based on academic accomplishments, technical skills, impact on diversity and leadership.
- Awarded the **Henry Steel Olcott Memorial Prize for Outstanding Performance** at Musaeus College for ranking **4th country-wide, 1st in Colombo district** at GCE Advanced Level Examination 2015.

### Hackathons

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- Emerged **Champions** at SheCODERess v2.0 in 2018, out of 180 participants from 60 teams.
- Emerged **Champions** at Hackaholics 2.0 in 2017, an intra-university hackathon organized by the IEEE Women In Engineering Student Branch Affinity Group of UCSC.
- Achieved a **country rank of 63** and a **global rank of 598** at IEEEExtreme 11.0 in 2017, out of more than **2220 teams**.

### Sports

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- Awarded **University Colors in Scrabble** for emerging Champions at 6 Scrabble Championships.

## Skills

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- **Programming Languages:** Java, Python, C/C++, Javascript, Typescript, Ballerina
- **Data Analytics:** Python, R & Octave, Weka, PyTorch, Keras & Tensorflow
- **Development:** HTML5, CSS, JavaScript, Angular, React, Node, Express AJAX, JQuery

## Presentations

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- **Aspect Oriented Suggestion Mining from Online Reviews**, 20th IEEE International Conference on Machine Learning and Applications (ICMLA) 2021, Pasadena, USA.
- **Improving Python Tools for Suricata**, SuriCon 2021, Boston, USA. Annual open source technology community conference that highlights discussions and developments relative to Suricata. [suricon.net/suricon-2021-boston](https://suricon.net/suricon-2021-boston)
- **A Beginner's Guide to Adding New Features to Suricata**, [webinar](#).

## References

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- **Dr. A. R. Weerasinghe**, Senior Lecturer, University of Colombo School of Computing.  
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- **Mr. Viraj Welgama**, Senior Lecturer, University of Colombo School of Computing.  
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