

# YASASI ABEYSINGHE

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## OBJECTIVE & SUMMARY

- Seeking an **Internship position** (Software Development, Research, or Data Science).
- **Senior Software Engineer**, Sysco LABS, Sep 2020 - Dec 2021.
- **Software Engineer**, Sysco LABS, Jan 2019 - Sep 2020.
- **Engineering Intern**, LSEG Technology, June 2017 - Dec 2017.
- **PhD Student**, Expected graduation date: May 2026, Computer Science.

## EXPERIENCE

### Old Dominion University, USA

**Graduate Research/Teaching Assistant**, Jan 2022 – Present

- Research on analyzing users' eye movements within VR/AR.
- Research on identifying objective measures using eye movements to assess human cognitive load and behavioral patterns.

### Sysco LABS, Sri Lanka

**Senior Software Engineer**, Sep 2020 – Dec 2021

- Developed the Event Platform 2.0 which provides the data streaming and processing capabilities to Sysco teams.

**Software Engineer**, Jan 2019 – Sep 2020

- Developed new features for the Event Platform 1.0 and the API Central which provides API management capabilities to Sysco.

### LSEG Technology, Sri Lanka

**Engineering Intern**, June 2017 – Dec 2017

- Built a tool to measure the compliance of each project team to Code Review Guidelines in LSEG Technology.

## PROJECTS

### Gaze Analytics Dashboard for Distributed Eye Tracking

Jan 2023 – Ongoing Old Dominion University

**Python | Pandas | MQTT | Holoviz | Streamz | Git**

Interactive gaze analytics dashboard that generates and visualizes real-time gaze measures in a distributed eye-tracking system.

### Assess Fake News Engagement via Eye movements

Jan 2022 – Ongoing Old Dominion University

**Python | Pandas | SciPy | NumPy | Git**

Research on analyzing eye movement data to identify reading patterns and to assess the engagement of fake news.

github.com/nirdslab/FakeNewsDataAnalysis

### Automatic Feature Extraction from Scientific Papers

Jan 2022 – Aug 2022 Old Dominion University

**Python | Pandas | NumPy | SciKit | Git**

Research and development of extracting features such as table and figure references, gender diversity of authors, and novelty for predicting reproducibility of scientific papers.

github.com/lamps-lab/TableAndFigureReferenceExtractor

github.com/lamps-lab/GenderDiversityByAuthorNames

### Event Platform

Jan 2019 – Dec 2021 Sysco LABS

**Java | Maven | Kafka | AWS Kinesis | Avro | Python | NodeJS**

Event Platform provides the capability to ingest and consume serialized or binary data into/from Apache Kafka topics and AWS Kinesis Streams.

### API Central

Jan 2019 – Dec 2021 Sysco LABS

**Google Apigee | Golang | Java | Kotlin | AWS | Docker | Git**

API Central provides API Management capabilities to Sysco with the use of Google Apigee API Manager.

## EDUCATION

### Ph.D. in Computer Science

**Old Dominion University, USA**

Jan 2022 – May 2026 (Expected), GPA: 4.0/4.0

### B.Sc. Engineering (Hons) in Computer Science & Engineering

**University of Moratuwa, Sri Lanka**

Oct 2014 – Dec 2018, GPA: 3.71/4.2

Specialized in Integrated Computer Engineering (ICE)

## ACHIEVEMENTS

- **Outstanding Researcher Award - 2024**  
Old Dominion University
- **Irwin B. Levinstein Scholarship - 2024**  
Old Dominion University
- **CINTEC Award - Academic Year 2017/18**  
University of Moratuwa
- **Graduated with First Class Honors - 2018**  
University of Moratuwa

## SKILLS

**Languages:** Python, Java, C/C++, JavaScript, HTML/CSS, Golang

**Software:** Maven, Docker, WEKA, Google Apigee, Github, Bitbucket, Jira

**Virtual Reality:** Unity, Meta Quest Pro

**Database:** MySQL, MongoDB

**AWS:** DynamoDB, RDS, S3, CloudWatch, EC2, AWS Lambda, CloudFormation

**Data Streaming:** AWS Kinesis, Apache Kafka

**Frameworks:** Pandas, NumPy, SciKit, SciPy, Apache Avro, Holoviz

**Operating Systems:** Windows, MacOS, Ubuntu

## SERVICES & OUTREACH

- **Publicity Chair:** ACM ETRA Conference (2024)
- **Treasurer:** ODU CS Graduate Society (2022-23)
- **Conference Session Chair:** Information Retrieval Access Session, Online, ACM/IEEE JCDL (2022)
- **Mentor Assistant:** ODU REU in Disinformation Detection and Analytics program (Summer 2022, Summer 2023)
- **Volunteer Judge:** Poster Session, ACM CAPWIC (2022)
- **Sub-Reviewer:** ACM CIKM (2022), IEEE Big Data (2022), ACM CHIIR (2022), ACM/IEEE JCDL (2023), ACM CHI (2024)

## PUBLICATIONS

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- **Yasasi Abeysinghe**, Bhanuka Mahanama, Gavindya Jayawardena, Yasith Jayawardana, Mohan Sunkar, Andrew T. Duchowski, Vikas Ashok, and Sampath Jayarathna (2024). "A-DisETrac Advanced Analytic Dashboard for Distributed Eye Tracking". In: *International Journal of Multimedia Data Engineering and Management (IJMDEM)* 15.1, pp. 1–20.
- **Yasasi Abeysinghe** (2023a). "Can Reading Web-based Information Affect Human Working Memory Capacity: An Eye Tracking Study". In: *Proceedings of the ACM/IEEE Joint Conference on Digital Libraries in 2023*. Doctoral Consortium Paper. (In Press).
- **Yasasi Abeysinghe** (2023b). "Evaluating Human Eye Features for Objective Measure of Working Memory Capacity". In: *Proceedings of the 2023 Symposium on Eye Tracking Research and Applications*. Doctoral Consortium Paper. DOI: 10.1145/3588015.3589537.
- **Yasasi Abeysinghe**, Bhanuka Mahanama, Gavindya Jayawardena, Mohan Sunkar, Vikas Ashok, and Sampath Jayarathna (2023). "Gaze Analytics Dashboard for Distributed Eye Tracking". In: *2023 IEEE 24th International Conference on Information Reuse and Integration for Data Science (IRI)*, pp. 140–145. DOI: 10.1109/IRI58017.2023.00031.
- Bhanuka Mahanama, Gavindya Jayawardena, **Yasasi Abeysinghe**, Vikas Ashok, and Sampath Jayarathna (2022). "Multidisciplinary Reading Patterns of Digital Documents". In: *Proceedings of the 2022 Symposium on Eye Tracking Research and Applications*. DOI: 10.1145/3517031.3531630.
- Rashindrie Perera, Tamasha Malepathirana, **Yasasi Abeysinghe**, Yumna Albar, and Uthayasanker Thayasivam (2019). "Amalgamation of General and Domain Specific Word Embeddings for Improved Hierarchical Aspect Aggregation". In: *2019 IEEE 13th International Conference on Semantic Computing (ICSC)*, pp. 55–62. DOI: 10.1109/ICOSC.2019.8665518.
- Tamasha Malepathirana, Rashindrie Perera, **Yasasi Abeysinghe**, Yumna Albar, and Uthayasanker Thayasivam (2019). "Adaptation of Multivariate Concept to Multi-Way Agglomerative Clustering for Hierarchical Aspect Aggregation". In: *Proceedings of the Thirty-Second International Florida Artificial Intelligence Research Society Conference (FLAIRS 2019)*.

## ARTICLES

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- **A-DisETrac:Advanced Analytic Dashboard for Distributed Eye Tracking**  
<https://ws-dl.blogspot.com/2024/05/2024-05-14-disetrac-advanced-analytic.html>  
This article explains the architecture of the A-DisETrac, an advanced gaze analytic dashboard for distributed eye tracking system.
- **Real-time Interactive Dashboard for Data in a Distributed System**  
<https://ws-dl.blogspot.com/2023/08/2023-08-15-real-time-interactive.html>  
This article explains an approach for developing an interactive visualization dashboard for real-time data in a distributed system using Python.
- **Regular Expression Rule-Based Approach for Table and Figure Reference Extraction from Scientific Papers**  
<https://ws-dl.blogspot.com/2022/05/2022-05-19-regular-expression-rule.html>  
This article explains a simple but effective rule-based approach using regular expressions (Regex) for extracting table and figure references from the text in scientific papers.

## TUTORIALS

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- **Compressing Data in Amazon Kinesis Data Stream with AVRO Data Serialization**  
<https://youtu.be/CJorHctmsi4>  
This video tutorial explains how to compress data in Amazon Kinesis Data Streams with Avro Data Serialization.




## OPEN-SOURCE CONTRIBUTIONS

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- **TableAndFigureReferenceExtractor**  
[https://github.com/lamps-lab/TableAndFigureReferenceExtractor/tree/main/src/table\\_and\\_fig\\_ref\\_extraction](https://github.com/lamps-lab/TableAndFigureReferenceExtractor/tree/main/src/table_and_fig_ref_extraction)  
Python Package for extracting the table and figure references from the text in scientific papers using Regular Expressions(Regex) with predefined lists of Regex patterns which represent different styles that the authors can use to refer tables and figures in scientific papers.
- **Real-time Interactive Dashboard for Distributed Systems**  
<https://github.com/yasasi-abeyasinghe/Realtime-Interactive-Dashboard-for-Distributed-Systems.git>  
Real-time visualization dashboard for a distributed system using Python.
- **amazon-kcl-sample-project**  
<https://github.com/yasasi-abeyasinghe/amazon-kcl-sample-project.git>  
Java Kinesis Client Library consumer application with data deserialization with Apache Avro.

## INVITED TALKS

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- **Ubiquitous Computing and Augmented Realities**   
CS 732/832 Human Computer Interaction Course, Old Dominion University (Spring 2024)
- **Believe It or Not: Exploring Human Perception while Reading Fake and Real News Articles**   
SPiRiT Lab Lecture Series, Magdeburg-Stendal University of Applied Sciences, Germany (2023)
- **Sensory Data Analytics**   
High School Summer Camp, "CARE: Coastal Adaptation and Resilience Education", Old Dominion University (2023)