

Menuka Warushavithana

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EDUCATION

Colorado State University <i>Ph.D. in Computer Science (On-going), Current GPA: 4.0/4.0</i>	Fort Collins, CO, USA <i>Jan. 2020 – Dec. 2024</i>
Colorado State University <i>MS in Computer Science, GPA: 4.0/4.0</i> <ul style="list-style-type: none">Main areas of study: Distributed Systems, Big Data, Blockchain, Machine Learning	Fort Collins, CO, USA <i>Jan. 2020 – Dec. 2021</i>
University of Moratuwa <i>B.Sc.Engineering (Hons.) in Computer Science & Engineering, GPA: 3.52/4.2</i> <ul style="list-style-type: none">Main areas of study: Distributed Systems, Database Systems, Machine Learning	Moratuwa, Sri Lanka <i>Nov. 2014 – Dec. 2018</i>

TECHNICAL SKILLS

Languages: Java, Python, PHP, Go (GoLang), JavaScript, C, HTML5/CSS
Frameworks: Hadoop MapReduce, Apache Spark, JUnit, Mockito, Vue.js, React.js, Laravel
Libraries: gRPC, JAX-RS, Java NIO, Netty, Pandas, Numpy
Databases: MySQL, MongoDB
Developer Tools: Git, Maven, Gradle, Docker

EXPERIENCE

Graduate Research Assistant <i>Colorado State University</i> <ul style="list-style-type: none">Conducted research on containerizing machine learning workloads using Docker and KubernetesApache Spark and Scikit-Learn were used for implementing the jobsKubernetes was used for workload orchestration	Jan 2020 - Present <i>Fort Collins, CO, USA</i>
Graduate Research Assistant <i>Colorado State University</i> <ul style="list-style-type: none">Spearheaded the development of a geospatial query service for multiple datasets (including data from U.S. Census Bureau, FEMA, etc. (over 1TB of data)Query service was implemented to support queries based on geometry and predicate logicManaged a MongoDB cluster spanning 50 nodesDeveloped an interactive web application to visually construct geospatial queriesTechnologies Used:<ul style="list-style-type: none">* Backend: Java, Gradle, gRPC, MongoDB* Frontend: Vue.js, Leaflet.jsProject repositories: https://github.com/Project-Sustain/sustain-query-service, https://github.com/Project-Sustain/sustain-dataset-explorer	Summer 2020 <i>Fort Collins, CO, USA</i>
Software Engineer <i>WSO2</i> <ul style="list-style-type: none">Worked as a member of the WSO2 Enterprise Integration Team (Research and Development division)Developed a command-line client tool using <i>Go</i> for the WSO2 Micro Integrator (which is a cloud-native Enterprise Service Bus)Improved the performance of the HTTP Transport Service of WSO2 Enterprise Integrator by roughly 3 times the initial values (using the network application framework <i>Netty</i>)	Jan. 2019 - Jan. 2020 <i>Colombo, Sri Lanka</i>
Intern Software Engineer <i>WSO2</i> <ul style="list-style-type: none">Developed a command-line tool for migrating APIs (protected with OAuth 2.0) between different WSO2 API Manager environments, thereby improved the user experience of WSO2 API ManagerTechnologies used: Go, Java, YAML, HTTP, REST, OAuth 2.0Project URL: http://bit.ly/wso2-apimtoolingContributed to the WSO2 API Manager Core	Jun. 2018 - Dec. 2018 <i>Colombo, Sri Lanka</i>

PROJECTS

Routing Packets Within a Structured Peer-to-Peer (P2P) Network Overlay | *Java, Gradle* Spring 2020

- Class assignment for CS455 Introduction to Distributed Systems (at Colorado State University) (<http://bit.ly/cs455-hw1>)
- Constructed a logical overlay over a distributed set of nodes
- Used partial information about nodes within the overlay to route packets

Scalable Server Design | *Java, Java NIO, Gradle* Spring 2020

- Class assignment for CS455 Introduction to Distributed Systems (at Colorado State University) (<http://bit.ly/cs455-hw2>)
- Implemented a thread pool to be used by the server
- Implemented the server with the ability to establish connections with multiple clients (100+) at once
- The server was able to send and receive data through these links
- Additionally, the server was capable of organizing data into batches and improve network performance

Automatic Identification of Legal Arguments | *Java, Python, MySQL* Jan. 2018 - Dec. 2018

- Senior year research at University of Moratuwa
- Developed research methodologies to intelligently identify legal arguments by parsing legal documents
- Created datasets using publicly available transcripts of court cases from the U.S. Supreme Court
- Concepts based on Machine Learning, Natural Language Processing, Information Retrieval, and Computational Linguistics were used
- (Publications related to this project are listed under the PUBLICATIONS section)

PUBLICATIONS

Journal Articles

- Ratnayaka, G., Rupasinghe, T., de Silva, N., Warushavithana, M., Gamage, V. S., Perera, M., & Perera, A. S. (2019). Classifying Sentences in Court Case Transcripts using Discourse and Argumentative Properties. *ICTer*, 12(1).

Conference Proceedings

- Gamage, V., Warushavithana, M., de Silva, N., Perera, A. S., Ratnayaka, G., & Rupasinghe, T. (2018).. “Fast Approach to Build an Automatic Sentiment Annotator for Legal Domain using Transfer Learning”. In : 9th Workshop on Computational Approaches to Subjectivity, Sentiment & Social Media Analysis, held in conjunction with EMNLP 2018 Conference.
- Ratnayaka, G., Rupasinghe, T., de Silva, N., Gamage, V. S., Warushavithana, M., & Perera, A. S. (2019). “Shift-of-Perspective Identification with in Legal Cases”. In: Proceedings of the 3rd Workshop on Automated Semantic Analysis of Information in Legal Texts (ASAIL 2019).