# Christopher Clarke

UNIVERSITY OF MICHIGAN · UNIVERSITY OF GUYANA · V75 INC. · NEXUS HUB INC.

*2260 Hayward Street, Ann Arbor, MI, 48109*

✉ csclarke@umich.edu | ⌂ csclarke.com | in christophersclarke

## Education

**University of Michigan** *Ann Arbor MI, USA*
PHD COMPUTER SCIENCE & ENGINEERING *Sept 2019 - present*
- Advisor: Dr. Jason Mars

**University of Michigan** *Ann Arbor, MI, USA*
GRADUATE CERTIFICATE IN INNOVATION & ENTREPRENEURSHIP *Sept 2021 - Apr 2023*
- GPA : 4.0

**University of Michigan** *Ann Arbor, MI, USA*
MSc. COMPUTER SCIENCE & ENGINEERING *Sept 2019 - Apr 2021*
- GPA : 4.0

**University of Guyana** *Georgetown, Guyana*
BSc. COMPUTER SCIENCE *Sept 2015 - May 2017*
- GPA : 3.2, pass w/Credit
- Undergrad thesis: *A Sentient approach to designing Smart Devices*

**University of Guyana** *Georgetown, Guyana*
ASc. COMPUTER SCIENCE *Sept 2013 - May 2015*
- GPA : 3.4, pass w/Distinction

## Professional Experience

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|---|---|
| Fall 2023 | **Research Scientist**, Microsoft |
| Fall 2022 | **Applied Scientist Intern**, Amazon |
| Summer 2022 | **Research Intern**, Microsoft |
| 2021 - Present | **Lecturer I**, University of Guyana |
| 2019 - Present | **Graduate Student Research Assistant**, University of Michigan |
| 2019 - Present | **Director**, V75 Inc. |
| 2018 - Present | **Director**, Nexus Hub Inc. |
| 2019 - 2020 | **Research Consultant (Core AI Team)**, Clinc Inc. (via V75 Inc.) |
| 2018 - 2019 | **Research Assistant**, University of Michigan |
| 2017 - 2021 | **Instructor**, University of Guyana |
| 2016 - 2018 | **Webmaster**, University of Guyana |
| 2016 - 2017 | **Teaching Assistant**, University of Guyana |
| 2015 - 2019 | **Software Engineer**, Version75 Solutions (now V75 Inc.) |
| 2013 - 2016 | **Information Technology Teacher**, Jos-el Educational Institute |

## Publications & Patents

### PUBLISHED

**Christopher Clarke**, Matthew Hall, Gaurav Mittal, Ye Yu, Sandra Sajeev, Jason Mars and Mei Chen. 2023. Rule By Example: Harnessing Logical Rules for Explainable Hate Speech Detection. 61st Annual Meeting of the Association for Computational Linguistics: ACL 2023 (PDF, Code)

**Christopher Clarke**, Yuzhao Heng, Yiping Kang, Krisztian Flautner, Lingjia Tang and Jason Mars. 2023. Label Agnostic Pre-training for Zero-shot Text Classification. Findings of the Association for Computational Linguistics: ACL 2023 (PDF,

Code)

**Christopher Clarke**, Joseph Peper, Karthik Krishnamurthy, Walter Talamonti, Kevin Leach, Yiping Kang, Walter Lasecki, Lingjia Tang, Jason Mars. 2022. One Agent To Rule Them All: Towards Multi-agent Conversational AI. Findings of the Association for Computational Linguistics: ACL 2022 (PDF, Code)

Yiping Kang, Ashish Mahendra, **Christopher Clarke**, Lingjia Tang, Jason Mars. 2022. Towards Personalized Intelligence at Scale. arXiv preprint 2022 (PDF)

Stefan Larson, Anish Mahendran, Joseph J Peper, **Christopher Clarke**, Andrew Lee, Parker Hill, Jonathan K Kummerfeld, Kevin Leach, Michael A Laurenzano, Lingjia Tang, Jason Mars. 2019. An Evaluation Dataset for Intent Classification and Out-of-Scope Prediction. Conference on Empirical Methods in Natural Language Processing and the 9th International Joint Conference on Natural Language Processing (EMNLP-IJCNLP), 1311–1316. (PDF, Code)

### In Review

**Christopher Clarke**, Karthik Krishnamurthy, Walter Talamonti, Yiping Kang, Lingjia Tang, Jason Mars. 2023. One Agent Too Many: User Perspectives on Approaches to Multi-agent Conversational AI. Under review

### In Prep

**Christopher Clarke**, Stefan Heng, Lingjia Tang, Jason Mars. 2023. PEFT-U: Parameter-Efficient Fine-Tuning for User Personalization at Scale. In prep

### Patents

Andrew Lee, Stefan Larson, **Christopher Clarke**, Kevin Leach, Jonathan K Kummerfeld, Parker Hill, Johann Hauswald, Michael A Laurenzano, Lingjia Tang, Jason Mars. 2020. Systems and methods for constructing an artificially diverse corpus of training data samples for training a contextually-biased model for a machine learning-based dialogue system. US Patent 10,796,104, 2020

## Awards, Fellowships, & Grants

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|---|---|
| 2022 | **Weinberg Institute for Cognitive Science Travel Award**, University of Michigan |
| 2022 | **William R. & Flora Hewlett Foundation Award**, University of Michigan |
| 2017 | **Seeds for the Future Programme Award Recipient**, Huawei |
| 2015 | **Promoting CSME through Field Promotion Award Recipient**, Caricom |

## Presentations

*presenting author; + mentored undergraduate*

### Invited Talks

Fall 2023. *Building Bridges in CSE PhD Studies*. NSBE student group, Wayne State University

Winter 2023. *Conversational AI Research: Challenges and New Frontiers*. EECS 449 Conversational AI, University of Michigan

Summer 2020. *DevOps Automation with Gitlab*. V75 Dev Talk, Remote (Video, Slides).

Spring 2018. *A Sentient Approach to Designing Smart Devices*. 2nd Annual Undergraduate Research Conference, Turkeyen, Guyana

### Contributed Presentations

Timothy Indarsingh*+, Girendra Persaud, **Christopher Clarke**. 2018. A Comparative Analysis of the Usability of Event Management Software Interfaces. Poster: 2nd Annual Undergraduate Research Conference, Turkeyen, Guyana

## Teaching Experience

| Winter 2023 | **EECS 449: Conversational AI**, Graduate Student Instructor | *University of Michigan* |
| Fall 2021 | **EECS 498: Conversational AI**, Graduate Student Instructor | *University of Michigan* |
| Summer 2018 | **CSE 1201: Introduction to Programming**, Lecturer | *University of Guyana* |
| Spring 2018 | **CSE 3203: Object Oriented Software Analysis, Design and Development**, Lecturer | *University of Guyana* |
| Spring 2018 | **CSE 2200: Contemporary Programming Paradigms**, Co-Instructor | *University of Guyana* |
| Fall 2017 | **ITE 4102: Applied Project**, Co-Instructor | *University of Guyana* |
| Fall 2017 | **CSE 3101: Internet Computing II**, Lecturer | *University of Guyana* |
| Fall 2017 | **CSE 2201: Internet Computing I**, Lecturer | *University of Guyana* |
| Fall 2017 | **CSE 2100: Data Structure & Algorithms**, Lecturer | *University of Guyana* |
| 2016-2017 | **V75 Web Developer Series**, Course Co-ordinator & Instructor | *WeOwn Space* |

## Mentoring

| 2022-Present | **Yuhzao (Stefan) Heng**, Undergrad, University of Michigan |
| 2021-2022 | **Victoria Shipman**, Explore CS Research Programme, University of Michigan |
| 2021-2022 | **Tamariah Davis**, Explore CS Research Programme, University of Michigan |
| 2017-2018 | **Timothy Indarsingh**, Undergrad Advisee, University of Guyana |

## Outreach & Professional Development

### SERVICE AND OUTREACH

| 2021-Present | **Explore Computer Science Research**, Mentor | *University of Michigan* |
| 2017-Present | **Nexus Hub Inc. Annual Hack-Solve**, Co-ordinator | *Georgetown, Guyana* |
| 2014-2017 | **University of Guyana Career Day**, Volunteer, Co-ordinator | *Georgetown, Guyana* |
| 2017 | **DevX Event**, Co-ordinator | *Georgetown, Guyana* |

### DEVELOPMENT

**MIT 15.390.1x: Entrepreneurship 101: Who is your customer?**, 2015.

**The Entrepreneurs & Innovators Group of Guyana: Entrepreneurship & Innovators Workshop**, 2015

**Caricom CSME in the classroom: Improving Teaching & Learning**, 2015

**HarvardX: GSE2x Leaders of Learning**, 2014.

### PEER REVIEW

**International Symposium on Code Generation and Optimization (CGO)**, Artifact Evaluation Committee

*2020*

**IEEE International Symposium on Performance Analysis of Systems and Software (ISPASS)**, Reviewer

*2020*

**Empirical Methods in Natural Language Processing (EMNLP)**, Reviewer

*2021 - 2023*

**Association of Computational Linguistics (ACL) Rolling Review**, Reviewer

*2022 - 2023*

**Neural Information Processing Systems (NeurIPS)**, Reviewer

*2022 - 2023*