# Dr. Jamell Dacon, Ph.D.

# CONTACT INFORMATION

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**G** Google Scholar: https://scholar.google.com/citations?hl=en&user=TaOS2ssAAAAJ

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### **CURRENT POSITIONS**

**9**: Morgan State University, MD, USA

Assistant Professor, Dept. of Computer Science School of Computing, Mathematics and Natural Sciences (SCMNS)

Sep 2023 - Present

Collaborator & Affiliate Faculty Member, Center for Equitable Artificial

Sep 2023 - Present

Intelligence and Machine Learning Systems (CEAMLS)

**Collaborator & Affiliate Faculty Member**, Institute for Trustworthy AI in Law and Society (TRAILS)

Sep 2023 - Present

## **EDUCATION**

**9**: Michigan State University, MI, USA

\* Doctor of Philosophy (Ph.D.): Computer Science

 $Jul \ 2023$ 

- ♦ Dissertation: "Conceptualizing Social Harms Arising from Bias and Discrimination in Natural Language Processing: Race, Gender & Language"
- Research Area(s): Natural Language Processing; Fairness, Accountability, Transparency and Ethics (FATE) in AI; Computational Social Science; Data Science for Social Good
- ♦ Advisor: Dr. Jiliang Tang

\* Master of Science (M.S.): Computer Science

May 2020

**♥**: City University of New York (CUNY) – Medgar Evers College, NY, USA

\* Bachelor of Science (B.S.), with honors: Mathematical Sciences

Jun 2018

\* Associates of Science (A.S.), with honors: Computer Science

Dec 2017

#### RESEARCH EXPERIENCE

Machine Intelligence and Data Science Lab, Morgan State University

Sep 2023 - Present

Principal Investigator & Director ♥: Baltimore, Maryland, USA.

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• Research Area(s): Trustworthy AI; Fairness, Accountability, Transparency and Ethics (FATE) in AI; Data Science for Social Good; and AI+X

Data Science and Engineering Lab, Michigan State University Research Assistant, Dept. of Computer Science and Engineering

Aug 2018 - Jul 2023

**9**: East Lansing, Michigan, USA.

- Research Area(s): Natural Language Processing; Fairness, Accountability, Transparency and Ethics (FATE) in AI; Computational Social Science; Data Science for Social Good
- \* Advisor: Dr. Jiliang Tang

Perception Team, Google Research

Oct 2022 - Jan 2023

Research Intern

- **9**: New York City, New York, USA.
  - ⋆ Manager(s): Krishna Somandepalli & Alonso Martinez

- \* Team Manager: Brendan Jou
- Research area(s): Fairness in Multi-modal Machine Learning
- Project(s): LEXI: Auditing Lexical Diversity and Topic Distribution in 1M M3
- Constructed robust pipeline to detect lexical diversity, creating a 5-step process to accurately identify differences in language structure, semantics and topic distribution.
- ⋄ Developed optimized machine learning algorithms, executing 20+ rounds of computationally intensive tests, increasing speed of data processing by 200%.
- Designed automated pipeline to identify communicative trends between language and canonical features i.e., people characteristics such as age, gender and skin tone in a multimodal dataset of 1 million hours of videos.

# Agile Analytics Team, Kimberly-Clark Cooperation

May 2022 - Aug 2022

Research Intern

**9**: Roswell, Georgia, USA.

- \* Manager: Mohammed Shammaa
- Research area(s): Agile Analytics, Data Analysis
- Project(s): Predictive Modeling for Delivery Productivity
- Developed an automated prediction pipeline leveraging ML classification models to predict OTIF reason code failures, achieving accuracy rate of over 90%.
- $\diamond$  Spearheaded experiments at both signal & data level with optimization algorithms, improving testing accuracy up to 12% in 12 weeks.
- ♦ Established a custom cost-benefit structure for monitoring model drift & alerting team when performance drops increasing effectiveness by 20%.

# Software Development Team | WAVES

May 2020 - Aug 2020

Research Intern

**9**: Lansing, Michigan, USA.

- Project(s): Modular Agent-Based Evolution (MABE) project
- Developed virtual CPUs for the Avida organisms.
- Built simple grid-based virtual worlds for organisms to move through and interact with.
- Extended and existing data management tools for fast and dynamic data manipulation.
- Improved unit tests and automatic testing suite.

#### Advanced Computational Research Experience for Students (ACRES),

May 2017 - Jul 2017

Research Assistant

**9**: Lansing, Michigan, USA.

- Project(s): Investigating the Distribution and Diversity of Bacterial ACC-d to Promote Plant Growth During Abiotic Stress.
- Advisor: Dr. Ashley Shade
- Research area(s): Bioinformatics, Computational Biology
- Created tracking scripts to identify changes in target genes.
- ♦ Implemented a sequence alignment algorithms, to establish gene clusters across different habitats and among microbial lineages.
- Collaborated with a Principal Investigator and microbiologists to identify workflows and projects directions.

## TEACHING EXPERIENCE

# **?**: Morgan State University, MD, USA

Instructor

Dept. of Computer Science (COSC)

Fall 2023

- $\diamond$  Course(s):
  - COSC 111 Introduction to Computer Science
  - COSC 352 Organization of Programming Languages

## **9**: Michigan State University, MI, USA

Instructor

Dept. of Computation, Mathematics, Science and Engineering (CMSE) Spelman College/ Michigan State University 3+2 Program Summer 2023

- $\diamond$  Course(s):
  - Introduction to Applied Linear Algebra, Data Structures and Algorithms, and Database Systems

Teaching Assistant

Dept. of Computer Science and Engineering (CSE)

Aug 2019 - Dec 2021

- $\diamond$  Course(s):
  - CSE 102 Algorithmic Thinking and Programming
  - CSE 231 Introduction to Python

# **♥**: City University of New York (CUNY) – Medgar Evers College, NY, USA

 $Teaching\ Assistant;\ Supplemental\ Instructor;\ Tutor$ 

Oct 2014 - May 2018

Dept. of Mathematics + Dept. of Physical, Environmental and Computer Science

- $\diamond$  Course(s):
  - MTHP 009 Developmental Math
  - MTH 10CS10/WKSP Cunystart Math/ MTH 10 Workshop
  - MTH 136 Intermediate Algebra and Trigonometry
  - MTH 136C Intergrated Elementary & Intermediate Algebra with Trigonometry
  - MTH 138 Intermediate Algebra and Trigonometry
  - MTH 151 Precalculus
  - MTH 202 Calculus 1
  - CS 151 Introduction to Computing
  - CS 241 Discrete Structures
  - CS 244 Object Oriented Programming and Design
  - CS 345 Scientific Programming I: Data Analysis

## **PUBLICATIONS**

The following list consist of peer-reviewed Conference, Journal, Tutorials & Workshops Proceedings. Please note the following symbols below to signify certain author types:

\* | co-first authors

- Sourabh Palande, Joshua A.M. Kaste, Miles D. Roberts, Kenia Segura Ab, Carly Claucherty, **Jamell Dacon**, Rei Doko, Thilani B. Jayakody, Hannah R. Jeffery, Nathan Kelly, Andriana Manousidaki, Hannah M Parks, Emily M Roggenkamp, Ally M Schumacher, Jiaxin Yang, Sarah Percival, Jeremy Pardo, Aman Y Husbands, Arjun Krishnan, Beronda L Montgomery, Elizabeth Munch, Addie M Thompson, Alejandra Rougon-Cardoso, Daniel H Chitwood, Robert VanBuren. "Topological data analysis across the evolution of flowering plants reveals a core gene expression backbone that defines plant form and function", 2023. (**PLOS Biology**).
- Damell Dacon and Jiliang Tang. "Beyond Race and Gender: A Look at Sociodemographic Biases Toward Persons with Disabilities". In Proceedings in the 9th International Conference on Computational Social Science, 2023. (IC<sup>2</sup>S<sup>2</sup> 2023) (Non-archival).
- ☑ Jamell Dacon and Jiliang Tang. "Can We Identify and Dismantle ISMs that Plague Our Society: An Online Approach". In Proceedings in the 9th International Conference on Computational Social Science, 2023. (IC<sup>2</sup>S<sup>2</sup> 2023) (Non-archival).
- Damell Dacon, Haochen Liu and Jiliang Tang. "Evaluating and Mitigating Inherent Linguistic Bias of African American English through Inference". In Proceedings in the 29th International Conference on Computational Linguistics, 2022. (COLING 2022).
- ☑ Jamell Dacon, Harry Shomer, Shaylynn L.A. Crum-Dacon, Jiliang Tang. "Detecting Harmful Online Conversational Content towards LGBTQ+ Individuals". Queer in AI Workshop, 2022. (NAACL 2022).
- ☐ Jamell Dacon. "Towards a Deep Multi-layered Dialectal Language Analysis: A Case Study of African-American English". In Proceedings of the 2nd Workshop on Bridging Human-Computer Interaction and Natural Language Processing, 2022. (NAACL 2022).
- ☑ Jamell Dacon and Jiliang Tang. "Examining Word Representations between #BlackLivesMatter Movement and its Counter Protests: 2013 to 2020". In Proceedings in the 8th International Conference on Computational Social Science, 2022. (IC<sup>2</sup>S<sup>2</sup> 2022) (Non-archival).
- 🔁 Jamell Dacon. "Understanding African American English on a Token-Level Beyond Accuracy". In Proceedings in the 8th International Conference on Computational Social Science, 2022. (IC<sup>2</sup>S<sup>2</sup> 2022) (Non-archival).

- ☑ Jamell Dacon, Haochen Liu and Jiliang Tang. "Using Inference to Mitigate Linguistic Bias Against African American English". In Proceedings in the 8th International Conference on Computational Social Science, 2022. (IC²S² 2022).
- Haochen Liu, Yiqi Wang, Wenqi Fan, Xiaorui Liu, **Jamell Dacon**, Lingjuan Lyu and Jiliang Tang. "Trustworthy AI: A Computational Perspective". In Proceedings in the 31st International Web Conference, 2022. (**TheWebConf 2022**).
- ☑ Jamell Dacon and Haochen Liu. "Does Gender Matter in the News? Detecting and Examining Gender Bias in News Articles". In Companion Proceedings in the 30th International Web Conference, 2021. (TheWebConf 2021).
- Damell Dacon and Haochen Liu. "Does Gender Matter in the News? Detecting and Examining Gender Bias in News Articles". In Proceedings in the 7th International Conference on Computational Social Science, 2021. (IC<sup>2</sup>S<sup>2</sup> 2021) (Non-archival).
- Haochen Liu\*, **Jamell Dacon**\*, Wenqi Fan, Hui Liu, Zitao Liu, and Jiliang Tang. "Does Gender Matter? Towards Fairness in Dialogue Systems". In Proceedings in the 28th International Conference on Computational Linguistics, 2020. (**COLING 2020**).
- 🔁 Tyler Derr, Zhiwei Wang, **Jamell Dacon**, and Jiliang Tang. "Link and Interaction Polarity Predictions in Signed Networks". Social Network Analysis and Mining, 2020. (**SNAM 2020**).

#### **PREPRINTS**

- **Jamell Dacon**. "Are You Worthy of My Trust?: A Socioethical Perspective on the Impacts of Trustworthy AI Systems on the Environment and Human Society", 2023. (**Preprint**)
- Jamell Dacon and Jiliang Tang. "What Truly Matters? Using Linguistic Cues for Analyzing the #BlackLivesMatter Movement and its Counter Protests: 2013 to 2020", 2021. (Preprint)

#### **INVITED TALKS & PANELS**

The following list consist of invited talks and panels.

Please note the following symbols below:

**♀** | Location

- AGEP Student Success Conference @ Michigan State University: How to be a Super Scholar Panel. Nov 2023
- **\varthi**: East Lansing, MI, USA
- § SLOAN Speaker Series 

  @ Spelman College: Towards the Dark Side of Aritifical Intelligence. 

  Oct 2023
- **9**: Atlanta, GA, USA
- ♣ University of Massachusetts-Amherst, LSA Summer Institute: Bridging Fieldwork, Corpus, and Jul 2023

  Experimental Methods to study Sociolectal Variation.
- **9**: Amherst, MA, USA
- $\P$  University of Copenhagen, Mærsk Tower: Beyond Race and Gender: A Look at Sociodemographic Jul 2023 Biases Toward Persons with Disabilities.
- **9**: Copenhagen, Denmark
- $\P$  Spelman College: Detecting Gender Bias using Natural Language Processing + A Career in Jun 2023 Biological Data Science.
- **9**: Atlanta, GA, USA
- Utah State University: Bias and Discrimination in NLP: Race and Gender.

Apr 2023

- **♥**: Logan, UT, USA
- **№** Stanford University–Computational Culture Lab: The Application of Computational linguistics Dec 2022 tools being developed in Comp Sci–Applying them to questions of sociological/organizational interest.
- **9**: Stanford, CA, USA
- ¶ Queer in AI @ NAACL 2022: Gender as a Variable in NLP.

Jul 2022

9: Seattle, WA, USA

- $\P$  The University of Chicago Booth School of Business, Chicago: Using Inference to Mitigate Linguistic *Jul 2022* Bias Against African American English.
- **9**: Chicago, IL, USA
- $\P$  University of North Florida–Diversity and Inclusion (DIVE-IN) Talk Series: Using Linguistic Cues *Oct 2021* for Analyzing the #BlackLivesMatter Movement and its Counter Protests: 2013 to 2020.
- **♥**: Jacksonville, FL, USA
- $\P$  Voice Tech Global: Addressing Implicit Bias Towards the Black Community in Conversational Jul~2020 Products.
- $\mathbf{Q}$ : Virtual

- Dean's List

# HONORS AND AWARDS

<b>♥</b> : Michigan State University	
– ERN: Emerging Researchers National Conference in STEM Travel Grant Award	Dec 2022
– Student Scholarship & Travel Award from COLING 2022	Oct 2022
– Best Poster Presenter Award from AGEP SSC 2022	Oct 2022
– Best Oral Presenter Award from AGEP SSC 2022	Oct 2022
– Google Conference Scholarship 2022	Jul 2022
– Student Scholarship & Travel Award from NAACL 2022	Jul 2022
– Student Scholarship Award from $IC^2S^2$ 2022	Feb 2022
– Michigan State University Supplemental University Fellowship	Feb 2022
– Student Scholarship Award from ICWSM 2021	May 2021
– Student Scholarship Award from TheWebConf 2021	Mar 2021
– NSF Graduate Research Fellowship	Aug 2020 - Aug 2023
– AAAI ICWSM Award 2020 for Black scholars	Jun 2020
– Michigan State University Graduate Leadership Fellowship	Jan 2020 - Dec 2020
– ICML Travel Grant Award	Jul 2019
– Michigan State University Enrichment Fellowship (UEF)	Aug 2018 - Aug 2023
<b>♥</b> : City University of New York (CUNY) – Medgar Evers College	
– Medgar Evers College Annual Awards	Apr 2018
<ul> <li>Award of Outstanding Academic Excellence</li> <li>Certificate of Academic Excellence in Mathematics</li> <li>Certificate of Academic Excellence in Computer Science</li> <li>Certificate of College &amp; Dept.al Service</li> </ul>	
– CUNY Medgar Evers College Foundation Scholarship	Apr 2018
– Google Research Scholarship	Feb 2018
– NASA Space Grant Scholarship	Jan 2018
– Brookhaven National Laboratory: Certificate of Scientific Programming in C++	
– Health Care Career Pipeline (HCCP) Scholarship	May 2017
– Provost's List	Apr 2016 - Jun 2018
– Elite Scholars Award	Jan 2016
– Umesh Nargakette Mathematics Scholarship	Nov 2015 & Nov 2016

Dec 2014 - Jun 2018

## EXTERNAL SERVICES

Workshop Organizer Chairships

- Workshop Lead-Organizer, Chair, Founder, Trustworthy AI: Addressing Socioethical Effects in Artificial Intelligence (ASEA) Worskhop:
  - Hosted at the 38th Annual AAAI Conference on Artificial Intelligence (AAAI 2024)

#### PC Member

• AAAI, CHI	2024
• AAAI, AI4EDU	2023
• AAAI, NAACL	2022
• AAAI, IJCAI	2021
• AAAI, ICML	2020

# Reviewer/Sub-reviewer

• AAAI, ACL, DAMI, NAACL, TheWebConf	2023
• ACL, LREC, NAACL, TheWebConf	2022
• ACL-IJCNLP, IJCAI, KDD, NAACL, TheWebConf	2021
• AAAI, IEEE BigData, IEEE IRI	2020

#### VOLUNTEERING

One Love Global - Non-Profit Organization

Volunteer/ Data Analyst

Feb 2022 - Present

- Detecting trends in disaggregated data to organize, educate and transform policy towards racial and healing justice utilizing data visualization tools. (Ongoing)
- Devised a sanctuary to gain a sense of belonging for Caribbean and African individuals of Lansing and East Lansing communities.
- Essentials Donation Drive
  - Organized an Extended Essentials Donation Drive partnering One Love Global and Michigan State University.
  - Partnered with Black Lives Matter Lansing Chapter to in hopes to give back to the communities.

# QSIDE Datathon

Team Member, Michigan State University

Oct 2021

• The goals are to collectively examine and analyze real-world criminal justice data to enhance our understanding of real-world social justice problems.

#### AGEP Student Success Conference

Judge, Michigan State University

Nov 2019

• Evaluating several undergraduate and graduate posters where the conference schedule is designed to help students and job-seekers be successful at various stages of their career journey.

Guided Learning Center — Diversity Programs Office

Tutor, Michigan State University

Jul 2019

- Organized small class meetings for student to practice low-level mathematics.
- Tutored students in small groups for Mathematics and Computer Science.
- Conducted study sessions 14 hours a week for students in grasping mathematical and computer science concepts.

Summer Research Opportunities Program (SROP)

Mentor, Michigan State University

May 2019

 Mentored two African American students prospective students in computer science to aid the matriculation of underrepresented students in Computer Science Graduate Programs.

Apr 2019

• Evaluating several posters at the **UURAF** at MSU, where 927 undergraduate student researchers from all MSU colleges displayed their work.

Middle School Girls Math and Science Day *Presenter*, Michigan State University

Mar 2019

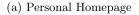
- Magical Recommendations presentation explaining recommendation algorithms for E-commerce businesses.
- Filters are Cool presentation explaining how computer vision algorithms and social media filter operate.

# **SKILLS**

- $\bullet$  Programming: Python, PySpark, SQL, C/C++
- Web Technologies: HTML, CSS, Javascript
- $\bullet\,$ Framework: PyTorch, Tensorflow, Sci<br/>Kit-Learn, Numpy, Scipy
- Data and Analytic Tools/ Coded using: Jupyter Notebook, Databricks, Tableau
- Operating Systems: Ubuntu, MacOS, iOS, WindowsOS

# **QR CODES**







(b) MINDS Lab at Morgan State University

Figure 1: QR Codes for accessibility.