Dr. Jamell Dacon, Ph.D.

CONTACT INFORMATION

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CURRENT POSITIONS

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

💼 **Assistant Professor**, Dept. of Computer Science   *Sep 2023 - Present*
School of Computing, Mathematics and Natural Sciences (SCMNS)

💼 **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   *Sep 2023 - Present*
and Society (TRAILS)

EDUCATION

📍: **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.

   • 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   *Aug 2018 - Jul 2023*
Research Assistant, Dept. of Computer Science and Engineering
📍: 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
📍: 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
📍: 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%.
- ⋄ 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
📍: 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
📍: 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*

- ⋄ Course(s):
    - – COSC 111 - Introduction to Computer Science
    - – COSC 352 - Organization of Programming Languages

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

- ⋄ 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*

 ⋄ 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

 ⋄ 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**).

⏍ **Jamell 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. (**IC²S² 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. (**IC²S² 2023**) (Non-archival).

⏍ **Jamell 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. (**IC²S² 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. (**IC²S² 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**).

🅟 **Jamell 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. (**IC²S² 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:
🎤 | Speaker: Title
📍 | Location

🎤 Spelman College: Towards the Dark Side of Aritifical Intelligence. *Oct 2023*
📍: Atlanta, GA, USA

🎤 University of Massachusetts–Amherst, LSA Summer Institute: Bridging Fieldwork, Corpus, and *Jul 2023* Experimental Methods to study Sociolectal Variation.
📍: Amherst, MA, USA

🎤 University of Copenhagen, Mærsk Tower: Beyond Race and Gender: A Look at Sociodemographic *Jul 2023* Biases Toward Persons with Disabilities.
📍: Copenhagen, Denmark

🎤 Spelman College: Detecting Gender Bias using Natural Language Processing + A Career in *Jun 2023* Biological Data Science.
📍: 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.
📍: Stanford, CA, USA

🎤 Queer in AI @ NAACL 2022: Gender as a Variable in NLP. *Jul 2022*
📍: Seattle, WA, USA

🎤 The University of Chicago Booth School of Business, Chicago: Using Inference to Mitigate Linguistic *Jul 2022*
Bias Against African American English.
📍: Chicago, IL, USA

🎤 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

🎤 Voice Tech Global: Addressing Implicit Bias Towards the Black Community in Conversational *Jul 2020*
Products.
📍: Virtual

HONORS AND AWARDS

📍: 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*

📍: City University of New York (CUNY) – Medgar Evers College

– Medgar Evers College Annual Awards	*Apr 2018*

- Award of Outstanding Academic Excellence
- Certificate of Academic Excellence in Mathematics
- Certificate of Academic Excellence in Computer Science
- Certificate of College & Dept.al Service

– 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*
– Dean's List	*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.

University Undergraduate Research and Arts Forum (**UURAF**)
Evaluator, Michigan State University   *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*
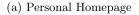
- **Magical Recommendations** presentation explaining recommendation algorithms
  for E-commerce businesses.
- **Filters are Cool** presentation explaining how computer vision algorithms
  and social media filter operate.

SKILLS

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

QR CODES

(a) Personal Homepage   (b) MINDS Lab at Morgan State University

Figure 1: QR Codes for accessibility.