CCSC Eastern Region 40th Annual Conference

Friday, October 18, 2024

Mount St. Mary's University, Emmitsburg, MD

12:00pm – 03:00pm	Registration The PAC Mezzanine
03:00pm – 04:00pm	**Welcome Remarks** Dr. Jerry Joyce, President, Mount St. Mary's University Dr. Christine McCauslin, Dean, School of Science, Mathematics, and Technology **Opening Keynote** *Speaker: Adrienne Decker* **Transforming Grading Practices in the Computing Education Community** It is often the case that computer science classrooms use traditional grading practices where points are allocated to assignments, mistakes result in point deductions, and assignment scores are combined using some form of weighted averaging to determine grades. Unfortunately, traditional grading practices have been shown to reduce achievement, discourage students, and suppress effort to such an extent that some common elements of traditional grading practices have been termed toxic. Using grades to reward or punish student behavior does not encourage learning and instead increases anxiety and stress. These toxic elements are present throughout computing education and computer science classrooms in the form of late penalties, lack of credit for code that doesn't compile or pass certain unit tests, among others. These types of metrics, that evaluate behavior are often influenced by implicit bias, factors outside of the classrooms (e.g., part-time employment), and family life situations (e.g., students who are caregivers). Often, students in these situations are disproportionately from low-socioeconomic backgrounds and predominantly students of color. In this talk, I will present a case for adoption of equitable grading practices in computer science classrooms and issue a call for additional support in classroom and teaching technologies as well as support from administrations both at the department and university level. I will explain the community of practice approach we are taking to both encourage adoption and to study the impact of these practices on students. Coad Science Building, Laughlin Auditorium
	Snack/Coffee Break Coad Science Building, 2nd Floor Entrance Hall

CCSC Eastern Region 40th Annual Conference

Friday, October 18, 2024

Mount St. Mary's University, Emmitsburg, MD

Session 1	Track 1 (Faculty Papers) Coad 151	Track 2A (Student Papers) Coad 107	Track 2B (Student Papers) Coad 111	Track 3 (Vendors) Coad 1st Floor	Track 4 Coad 158
04:15pm – 05:30pm	*Jguardrail: A Framework for Identifying Possible Errors in Student Java Code* **Finlayson, Ian; Davies, Stephen** *FACE: a Framework for AI-driven Coding Generation Evaluation* **Ngo, Bao; Formato, Jack; May, James; Ho, Nguyen; Bui, Hoang; Ngo, Linh** *Improving Introductory Java Programming Education Through ChatGPT* **Xie, Jingnan**	*Designing and Prototyping a Parking Space Monitoring System with Generative AI and Large Multimodal Models* **Poffenberger, Rachael; Cornejo, Chaz; Liao, Weidong** *Investigating Deepfake Detection using LIME* **Delancy, Sanda L; Liang, Lily** *An Analysis of Blockchain Approach in AI & Cyber-Physical Systems* **Robinson, Jared Lawrence** *Malware Detection using Deep Learning* **Rockefeller, Roxan Chioma**	*Implementing a FashionBot Curriculum in High School Classroom to Improve Student Engagement and Motivation in Computing* **Ukeneru-Steve, Onyinye; Liang, Lily** *Mobile Application for Object Recognition for visually impaired people* **Renner, Isha Salma; Niyiowoeye, Omobolanle Favour; Miller, Christopher; Fahmida, Maysha; Sarker, Md Kamruzzaman** *Enhancing Learning of Matrix Transformations through Immersive Virtual and Augmented Reality Interfaces* **Nanon, Kantida; Vinnikov, Margarita; Schwartz, Mathew; Lee, Michael**	Evapco **Mike Hilker** **Jarrod Stebick** JBL publishing **Jonathan See** Rephactor **Dr. Tom Way** CodeZinger **Bhaskar Rao**	Cyber CTF
05:30pm – 06:45pm	**Poster Session/Reception** Coad Science Building, 2nd Floor Entrance Hall				

| 07:00pm – 09:30pm | **Banquet**
 Dinner service begins at 7:30pm

 Banquet Speaker
 Speaker: Gary McGraw
 Stacking up the LLM Risks: Applied Machine Learning Security
 I present the results of an architectural risk analysis (ARA) of large language models (LLMs), guided by an understanding of standard machine learning (ML) risks previously identified by BIML in 2020. After a brief level-set, I cover the top 10 LLM risks, then detail 23 black box LLM foundation model risks screaming out for regulation, finally providing a bird's eye view of all 81 LLM risks BIML identified. BIML's first work, published in January 2020 presented an in-depth ARA of a generic machine learning process model, identifying 78 risks. In this talk, I consider a more specific type of machine learning use case—large language models—and report the results of a detailed ARA of LLMs. This ARA serves two purposes: 1) it shows how our original BIML-78 can be adapted to a more particular ML use case, and 2) it provides a detailed accounting of LLM risks. At BIML, we are interested in "building security in" to ML systems from a security engineering perspective. Securing a modern LLM system (even if what's under scrutiny is only an application involving LLM technology) must involve diving into the engineering and design of the specific LLM system itself. This ARA is intended to make that kind of detailed work easier and more consistent by providing a baseline and a set of risks to consider.

 Carriage House Inn, Emmitsburg | |

CCSC Eastern Region 40th Annual Conference

Saturday, October 19, 2024

Mount St. Mary's University, Emmitsburg, MD

07:30am – 09:00am	**Registration/Breakfast** Coad Science Building, 2nd Floor Entrance Hall				
Session 2	**Track 1A** (Faculty Papers) Laughlin Auditorium	**Track 1B** (Faculty Papers) Coad 117	**Track 2** (Nifty Ideas) Coad 158	**Track 3** (Vendors) Coad 1st Floor	**Track 4** Coad 109
09:00am – 09:45am	*Stigma: A Tool for Modifying Closed-Source Android Applications* **Novak, Ed** *Addressing the Gap Between How Students and Professionals Read Code* **Woerner, Matthew; Socha, David; Kochanski, Mark**	*Programming and Control of Physical Autonomous Robots via ROS 2* **Ma, Lili; Rosa, Christian; Li, Xiaohai; Wang, Yu; Mendoza, Benito; Zhang, Andy S.** *Design and Development of the FlexBE WebUI with Introductory Tutorials* **Raymond, Samuel; Walters, Grace; Luzier, Josh; Conner, David C.**	*Neurodiversity and computer science: working with neurodiverse students to accomplish their education goals* **Wentzell, Andrea Marie** *Teaching Software Engineering Concepts while Using AI Tools for Programming in Intro Computer Science* **Bush, Jeffrey A** *Standards-based grading in a wide variety of courses* **Heinold, Brian**	Evapco **Mike Hilker** **Jarrod Stebick** JBL publishing **Jonathan See** Rephactor **Dr. Tom Way** CodeZinger **Bhaskar Rao**	Programming Competition
	Snack/Coffee Break Coad Science Building, 2nd Floor Entrance Hall				

Saturday, October 19, 2024

Mount St. Mary's University, Emmitsburg, MD

Session 3	Track 1A (Faculty Papers) Laughlin Auditorium	Track 1B (Faculty Papers) Coad 117	Track 2 (Student Papers) Coad 158	Track 3 (Workshop) Coad 151	Track 4 Coad 109
10:00am – 11:15am	*English to American Sign Language: An AI-based Approach* **May, James; Brennan, Kyle; Amiruzzaman, Stefanie; Amiruzzaman, Md** *Teaching Bioinformatics Students to Lead Reproducible Research* **Darby, Miranda** *Studying Financial Data with Macroeconomic Factors using Machine Learning* **Anem, Sai Sravya; Amiruzzaman, Md; Bhuiyan, Ashik Ahmed**	*Ad-hoc Ensemble Approach for Detecting Adverse Drug Events in Electronic Health Records* **Aryal, Saurav Keshari; Prioleau, Howard** *Finiteness Considerations in Machine Learning* **Jackson, Jeffrey C** *An ontology for Social Determinant of Education (SDoED) based on human-AI collaborative approach* **Kollapally, Navya Martin; Geller, James; Morreale, Patricia A; Kwak, Daehan**	*Malware Detection in Android Phone* **Marshall, Dawn Lyndsay; Sarker, Kamruzzaman** *Multi-Party Computation in a United States-based E-Voting System* **Govere, Ephraim; Rizvi, Syed** *Unveiling the Deception: Understanding the Urgent Need to Combat Deep Fake Videos* **Danner, Jada Alexis**	*Using a Distinctive Curricular Design Process for Liberal Arts Computing Programs* **Barnard, Jakob E.; Braught, Grant; Davis, Janet; Holland-Minkley, Amanda; Reed, David; Schmitt, Karl; Tartaro, Andrea; Teresco, James** Workshop attendees can go to the first half (leave at the break), the second half (arrive after the break) or repeat sessions for extended dialog	Programming Competition
	Snack/Coffee Break Coad Science Building, 2nd Floor Entrance Hall				

Session 4	Track 1A (Faculty Papers) Laughlin Auditorium	Track 1B (Faculty Papers) Coad 117	Track 2 (Panel Discussion) Coad 158	Track 3 (Workshop) Coad 151	Track 4 Coad 109
11:30am – 12:45pm	*The Impact of Changing a Course to Follow Equitable Grading Practices: A Case Study of Incremental Changes to Grading in Computer Science III* **Cooper, David Grant** *Enabling Blind and Low-Vision (BLV) Developers with LLM-driven Code Debugging* **Saben, Clark; Self, Jessica Zeitz; Chandrasekar, Prashant** *Comparing K-8 Computing Education Implementations between South Africa and Sweden* **Lee, Michael J.; Lang, Annie; Ferwerda, Bruce**	*Strengthening Financial IoT Systems Against Bank Fraud: Integrating Data Backup and Recovery Solutions* **Rizvi, Syed; McKimm, Steven; Bush, Jonathan; Rhyner, Lukas; Diaz, Christian** *Decoding SPAM: A Comprehensive Exploration of Unsolicited Messages* **Bany Muhammad, Nooh; Alghamaz, Luma** *Demystifying the RSA Algorithm: An Intuitive Introduction for Novices in Cybersecurity* **Luo, zhengping; Liu, Ruowen; Mehta, Aarav; Ali, Md Liakat**	*AI Intersections: Ethics, Education, and Technological Philosophy* **Polack, Jennifer; Reno, Michael; Russell, Victoria; Rao, Anand; Nutter, Taylor**	*Using a Distinctive Curricular Design Process for Liberal Arts Computing Programs* **Barnard, Jakob E.; Braught, Grant; Davis, Janet; Holland-Minkley, Amanda; Reed, David; Schmitt, Karl; Tartaro, Andrea; Teresco, James** Workshop attendees can go to the first half (leave at the break), the second half (arrive after the break) or repeat sessions for extended dialog	Programming Competition
01:15pm – 02:15pm	**Luncheon/Awards** Coad Science Building, 2nd Floor Entrance Hall and Laughlin Auditorium				
02:30pm – 03:30pm	Planning Meeting Coad 158				