The Graduate School

Presents

2nd Graduate Research Workshop

GRW 2022

Friday, April 29, 2022

9:00 AM – 4:00 PM

Virtual Only ~ Microsoft Teams

Morning Ceremony Kick Off @ ***9:00 AM***

9:00 AM Morning Ceremony Kick Off
9:30 AM Keynote Address
10:00 AM Session 1: Learning, Leadership and Student Achievement
11:00 AM Session 2: Mobile Applications, Cyber, and Data Science
12:00 PM Session 3: Augmented Reality and Counselling
1:30 PM Panel Discussion 1: Examining the opportunities of eSports in Academia
2:30 PM Panel Discussion 2: Great resignation from the field to the office
3:30 PM Awards Ceremony

Dr. Aminta H. Breaux, President, Bowie State University
Dr. Carl Goodman, Provost and Vice President Academic Affairs, Bowie State University
Dr. Cosmas U. Nwokeafor, Dean, Graduate School, Bowie State University
Dr. Mathias Mbah, Assistant Dean, Graduate School, Bowie State University
Dr. Sharad Sharma, Professor, Department of Computer Science, Bowie State University

Workshop Website: https://sharadonly.github.io/GRW/

History of Bowie State University

Bowie State University is an outgrowth of a school opened in Baltimore, Maryland, by an organization dedicated to offering educational opportunities that the state failed to provide for its black citizens.

From those humble beginnings, Bowie State has become a comprehensive university, offering 23 undergraduate majors, 20 master's degree programs, 16 specialty certificates, and two doctoral programs in a broad range of disciplines. Bowie State University continues to build on its legacy of providing access to a high-quality education.

Founding of the First School

The Baltimore Association for the Moral and Educational Improvement of the Colored People was organized in 1864 by 46 men, comprised of businessmen, lawyers, clergymen and Quakers, committed to opening schools to educate the state's newly emancipated citizens. One of those men was Joseph M. Cushing, an outspoken champion for the education of the black population.

As chairman of the Educational Committee for Maryland's Constitutional Convention in 1864, Cushing chastised the committee's refusal to fund schools for black people: "There will come a time when this state will be forced by public opinion to provide means for educating our colored population." The association opened its first Baltimore school, School #1, on January 9, 1865, in the African Baptist Church in Crane's Building on the corner of Calvert and Saratoga streets. The school offered courses in the elements of education. Courses to train teachers were added in 1866.

The facility was woefully inadequate. In 1867, with the aid of the Freedmen's Bureau, the Quakers of England and others, the Baltimore Association purchased and renovated the Old Friends Meeting House at the corner of Saratoga and Courtland streets to house the Baltimore Normal School for Colored Teachers.

Move to Bowie

After repeated petitions from the Baltimore Normal School trustees, the state legislature authorized the Board of Education to assume control of the school in 1908 and re-designated it as Normal School No. 3, finally fulfilling the dream of Cushing and the Baltimore Association. By 1910, the state decided to relocate the school to Bowie, Maryland, purchasing a 187-acre tract formerly known as Jericho Farm dating to 1716. The school opened at the new location in 1911 with about 60 students and Don Speed Smith Goodloe as the first black man to head the school as principal. In 1914, its name changed to the Maryland Normal and Industrial School at Bowie.

Under President Leonidas James, the school began a two-year professional curriculum in teacher education in 1925, which expanded to a three-year program in 1931. A four-year program to train elementary school teachers was introduced in 1935, and the school was renamed the Maryland Teachers College at Bowie in 1938. Teacher education continued to expand under the 25-year tenure of President William Henry. The institution established programs to train teachers for junior high school (1951) and secondary education (1961) and advanced toward becoming a liberal arts college.

Transition to a State Liberal Arts College

The Maryland State Legislature authorized the college to become Bowie State College in 1963, following the establishment of a liberal arts program. New majors in English, history and general social science were added, expanding offerings beyond teacher education. Under President Samuel Myers, the college established its first graduate degree program, offering the Master of Education in 1969. The first director of the graduate division was Dr. J. Alexander Wiseman, a graduate of the Maryland Teachers College at Bowie and the first African-American to earn a doctoral degree from the University of Maryland, College Park.

Emergence as a Comprehensive University

In 1988, Bowie State College became Bowie State University under President James Lyons, reflecting significant growth in academic programs, enrollment and community service. On the same day, the university also became one of the member institutions of the newly formed University System of Maryland. Bowie State University gained recognition as a leader in the education of science, technology, engineering and mathematics (STEM) disciplines. In 1995, Bowie State won an 11-year, $27 million award from the National Aeronautics and Space Administration/National Science Foundation, becoming one of only six national Model Institutions for Excellence in STEM.

Today's Bowie State University

Bowie State University ranks among the nation's top comprehensive universities, cultivating next-generation leaders by providing opportunities for students to discover their strengths through focused academic experiences and opportunities to tackle real-world problems. Now more than ever, Bowie State University is committed to preparing students for success in a highly technological, global society.

The Graduate School Administration

PRESIDENT
Dr. Aminta Breaux

PROVOST/ VP for ACADEMIC AFFAIRS
Dr. Carl Goodman

DEAN, THE GRADUATE SCHOOL
Dr. Cosmas U. Nwokeafor

ASST. DEAN, THE GRADUATE SCHOOL
Dr. Mathias Mbah

Greetings,

Welcome, and thank you for your support for the inaugural Bowie State University Graduate Research Workshop! On behalf of the entire campus community, I extend my congratulations to our students, faculty and staff of the Graduate School at BSU on their scholarly activities and contributions to the Science, Technology, and Engineering and Math (STEM) fields.

Today, we take time out to say, "well done" to everyone in the BSU Graduate School. I am proud of all they have achieved and for their hard work and determination in creating a virtual workshop that will offer a chance for students to enrich valuable skills across STEM fields for a global workforce.

The panelists and faculty members taking part in this workshop are essential to the success of each of our graduates and their research. This workshop represents a great opportunity for our Bulldogs to refine their communication skills and career preparedness, and to demonstrate their outstanding achievements during this extraordinary year. Throughout the year, our graduates have confronted numerous challenges presented by the ongoing pandemic, yet throughout they have risen to the occasion and remained Bowie **BOLD**—bright, persistent and determined.

The U.S. Bureau of Labor Statistics projects that occupations in the STEM field are expected to grow 8% by 2029, compared to 3.7% for all occupations. It is, therefore, vital to the success of our graduates that they gain the skills and experience essential for greater innovation, creativity and agility in this new normal and an ever-changing world.

Again, thank you to all of the participants attending today's workshop and for your ongoing support of our graduates, their research, and contributions to the STEM fields at Bowie State University to help create a better tomorrow for us all!

Sincerely,

Aminta H. Breaux

Welcome Message from Workshop Chair

Dr. Sharad Sharma

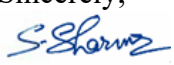
Graduate Research Workshop Chair and Organizing Chair

Welcome to the 2nd BSU Graduate Research Workshop (GRW), which is an annual event hosted by the Graduate School at Bowie State University. Last year we successfully held the inaugural Bowie State University Graduate Research Workshop in April 2021. This year we have expanded the scope of the workshop and included more panel discussions. The safety and well-being of all conference participants is our priority. After evaluating the current COVID-19 situation and the uncertainty around travel, GRW 2022 Workshop will be an online event. The objectives of the workshop are to help graduate students to enhance their research and communication skills, and to better understand how to prepare for science and educational careers in a global workforce. Towards this end, the general format for the one (1) day workshop will include oral presentations. Other workshop activities include:

- Understanding STEM careers in a global context and identifying international research and education opportunities.
- A panel discussion on current research topic in academia and industry.
- Building research skills and developing focus on employment searches and retention.

On behalf of the organizing committee, I warmly welcome you to the 2nd BSU Graduate Research Workshop that includes three (3) sessions namely, Session 1: Learning, Leadership and Student Achievement, Session 2: Mobile Applications, Cyber, Decision support, and Session 3: Augmented Reality and Counselling. There are two panel discussions after lunch namely, Panel Discussion 1: Examining the opportunities of eSports in Academia, and Panel Discussion 2: Great resignation from the field to the office. This event will culminate with an award ceremony and certificates.

Sincerely,



Sharad Sharma, Ph.D.
Professor in Department of Computer Science and Director of Virtual Reality Laboratory
Bowie State University, Bowie, MD 20715

Keynote Speaker

Dr. Cosmas U. Nwokeafor

Dr. Cosmas U. Nwokeafor is a full professor of Mass Communication at Bowie State University where he currently serves as the Dean of Graduate School. He has served as a Provost Fellow and Assistant Provost for Graduate Studies at Bowie State University. Prior to his current position, he has served as the Assistant Dean and Dean of the College of Arts and Sciences respectively as well as the Chair of the Department of Communication. His professional experiences include leadership training at Harvard University. He has participated at the Oxford Roundtable workshop in Oxford, London, where his paper was among the top ten papers that was published on the journal forum on public policy on-line, spring 2009 (http://forumonpublicpolicy.com).

Dr. Nwokeafor also presented a paper at the 2013 Oxford Education Research Symposium in London. He has conducted research in the areas of development communication, new communication technologies and Media role in development in Africa, conundrum of autism, and retention studies. Currently, he serves as the Council of Historically Black Graduate Schools President. He did serve also as the reviewer of CHBGS /UMI ProQuest award committee chair for dissertation submissions from (CHBGS) member institutions. He also served as the vice president of the Council of Historically Black Graduate Schools, and its secretary for three years.

Dr. Nwokeafor was the past Associate Editor of the Journal of African Communication (JAC). He has been involved as a co-PI in some funded and unfunded grants among which are the multimillion dollar project learning community (Project LINC), National Science Foundation (NSF) proposal titled "Prince George's Partnership for Innovation and a 4.5 million dollar National Science Foundation (NSF) grant titled "Training Institute for Practicing Mathematics and Sciences Teachers. Dr. Nwokeafor has received numerous awards such as the 6th time awardees of Who's Who Among America's Teachers'; Who's Who in the Media and Mass Communications; Who's Who in American Education; Who's Who in America; Who's Who in the East; Who's Who in the World; He received an award as a Member of the International Authors and Writers; and Citizen Ambassador Program. Dr. Nwokeafor is a Pointer Institute for Media, American Press Institute and Capital/ABC Fellow. He has published nine books, six book chapters and is the author of numerous scholarly peer reviewed journal articles. Dr. Nwokeafor reviewed John Merrill's book, **Global Communication.**

Dr. Nwokeafor received a National Certificate in Education (Pedagogy) at the prestigious Alvan Ikoku Federal College of Education, Owerri, Nigeria, a bachelor's degree in Journalism from Howard University in 1986, masters in Mass Communication in 1990 and a doctorate in Mass Communication from Howard University in 1992.

PROGRAM

Welcome	Dr. Uchenna Onuzulike Professor, Department of Communications Bowie State University
Opening Remarks:	Dr. Carl Goodman Provost & VP Academic Affairs Bowie State University
Introduction of Keynote Speaker & Event Overview:	Dr. Sharad Sharma Professor, Department of Computer Science GRW Chair and Organizing Chair Bowie State University

Keynote Speaker
Dr. Cosmas U. Nwokeafor
Dean, Bowie State University Graduate School

BSU GRW 2022 Presenters:

Oluseun Holmes
Ernese Lawson Walters
Adeola Oshiyemi
Tanviben Patel
Syltinsy Jenkins
Jerry Diabor
Dinali Jayawardana
Denevieve Yaeger
Michael McGee

BSU GRW Panel Moderators:

Dr. Andrew Mangle
Associate Professor, Dept. of Management Information Systems, Bowie State University

Dr. Ann Hilliard
Associate Professor, Program Director, Department of Educational Leadership, Bowie State University

BSU GRW Panelists:

Dr. Vinson
Dr. Obeidat
Dr. Mangle
Dr. Kargbo
Dr. Anucha
Dr. Bellamy
Dr. Walters

Panel Discussion Topics:

1. An explanation of academic eSports, its benefits, and potential in a graduate school setting
2. How can companies and employers retain employees and avoid burnout

Awards Ceremony & Closing Remarks: Dr. Cosmas U. Nwokeafor & Dr. Sharad Sharma
Dean, Graduate School — Professor, Department of Computer Science, GRW Chair and Organizing Chair

Graduate Research Workshop Event Access Links & Sessions Start Time

Morning Session Access (9:00 AM – 10:00 AM)

- Opening & Welcoming Remarks
- Bowie State University Inaugural Graduate Research Workshop Overview
- Keynote Speaker

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Afternoon Panel Session 1 (1:30 PM – 2:30 PM)

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Afternoon Panel Session 2 (2:30 PM – 3:30 PM)

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Award Ceremony Access (3:30 PM – 4:00 PM)

- Bowie State University Inaugural Graduate Research Workshop Awards
- Closing Remarks

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Sessions Access (10:00AM-1:00PM)

Please visit links for individual session workshops during 1-hour block period or call in (audio only)

***Session 1*: Learning, Leadership, and Student Achievement**			
SESSION 1	***Candidate 1***	***Candidate 2***	***Candidate 3***
10:00AM-11:00AM	**Oluseun Holmes** *"Teachers' Perception: Integration of Technological Tools in Teaching Mathematics to Fourth Grade Students in Five Schools in a Mid-Atlantic State"*	**Ernese Lawson Walters** *"Principals' leadership style in correlation to teachers' job satisfaction , turnover, and the impact on student achievement"*	**Adeola Oshiyemi** *"Education: Online Learning Vs Classroom Learning"*

https://teams.microsoft.com/l/meetup-join/19%3ameeting_ODQyNTM2Y2MtNTU4Yy00MjE2LThiZjEtMTYwODBmZjk5ZDU5%40thread.v2/0?context=%7b%22Tid%22%3a%22d49ab9ea-99ec-4552-8651-bd94f79aa5e5%22%2c%22Oid%22%3a%22ca1619a8-83c3-42bf-b979-0db783564050%22%7d

Or call in (audio only)
+1 301-960-8307,,285111994# United States, Silver Spring
Phone Conference ID: 285 111 994#

***Session 2*: Mobile Applications, Cyber, and Data Science**			
SESSION 2	***Candidate 1***	***Candidate 2***	***Candidate 3***
11:00AM-12:00PM	**Tanviben Patel** *"Mobile Application to detect Brain Tumor, Lung Carcinoma, Breast Cancer and Covid-19 from Magnetic Resonance Imaging and Ultra Sound Imaging using Artificial Neural Networks"*	**Syltinsy Jenkins** *"Building a Recommender System for NASA's Planetary Data Systems Small Bodies Node"*	**Jerry Diabor** *"The insurgence of computer threats and combating with system intelligence; the war and the fight of cyber threats"*

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Or call in (audio only)
+1 301-960-8307,,510797395# United States, Silver Spring
Phone Conference ID: 510 797 395#

***Session 3*: Augmented Reality and Counseling**			
SESSION 3	***Candidate 1***	***Candidate 2***	***Candidate 3***
12:00PM-1:00PM	**Dinali Jayawardana** *"AR-DETECT-Object Mobile Augmented Reality Application Integrated With Global Positioning System"*	**Genevieve Yaeger** *"A BOLD New Approach: Preparing Our Trainers to Counsel in Dual Pandemics"*	**Michael McGee** *"Understanding Fetus Psychological Development using the Diathesis-Stress Model through a Psychoeducational Group Counseling Approach"*

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Or call in (audio only)
+1 301-960-8307,,707529516# United States, Silver Spring
Phone Conference ID: 707 529 516#

Inaugural Graduate Research Workshop 2022 Session
Judges

Session 1: Learning, Leadership, and Student Achievement

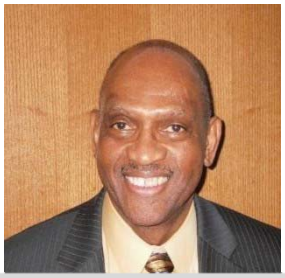
DR. JACQUELINE SWEENEY
Professor
Masters of Arts in Reading Education
Department of Teaching, Learning, and Professional Development

COLLEGE OF EDUCATION
Bowie State University

DR. WASEEM MAZHER
Professor
Masters of Education in Special Education
Department of Teaching, Learning, and Professional Development

COLLEGE OF EDUCATION
Bowie State University

Session 2: Mobile Applications, Cyber, and Data Science



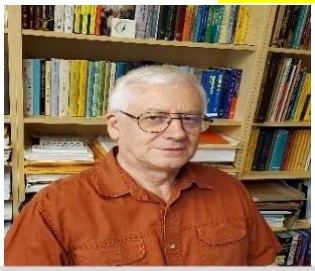
DR. CUBIE BRAGG
Professor
Masters of Arts in Counseling Psychology
Department of Counseling

COLLEGE OF EDUCATION
Bowie State University

DR. CYNTHIA TAYLOR
Professor
Masters of Education in School Counseling
Department of Counseling

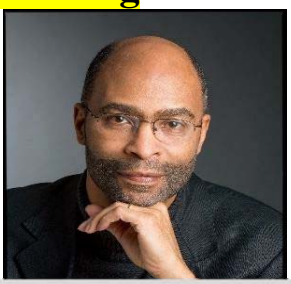
COLLEGE OF EDUCATION
Bowie State University

Session 3: Augmented Reality and Counseling



DR. ROMAN SZNAJDER
Professor
Masters of Arts in Applied Computational Mathematics

COLLEGE OF ARTS & SCIENCES
Bowie State University



DR. GRANVILLE SAWYER
Professor
Masters of Business Administration

COLLEGE OF BUSINESS
Bowie State University

Graduate Research Workshop Panelist Members

Panel Moderators	Professional
Dr. Andrew Mangle	Associate Professor, Department of Management Information Systems, Bowie State University
Dr. Ann Hilliard	Associate Professor, Department of Educational Leadership, Bowie State University

Panelists	Professional
Dr. Vinson **Dr. Obeidat** **Dr. Mangle**	**Head of Non-Academic eSports** **Data Analytics Coordinator** **Academic eSports Advocate**
Dr. Harriet Kargbo **Dr. Hyacinth Anucha** **Dr. Bettye Bellamy** **Dr. Milton Walters**	

Panel Topics
Panel Discussion 1: Examining the opportunities of eSports in Academia Academic eSports is at the intersection between the classroom and playground. Unlike traditional sports, Academic eSports seeks to contribute value to academia and industry through collegial competition—participant's face-off against one another through a common challenge – data, research, or case. The emphasis is on measured learning and progress using a recreational activities method. The events include scoreboards, assessments (pre-post), supporting resources, mentors, and a specific theme. The format encourages inclusivity and onboarding to create pathways for careers in practice and research. Participants can view and be recognized for their participation, while academia can extend curriculum and programs. By aggregating similar themes and subject areas together, Academic eSports can be seasonal and context specific. Academic eSports add value by engaging students in additional experiential learning opportunities. Finally, the workshop explores the possibility and potential of eSports in a graduate setting. **https://teams.microsoft.com/l/meetup-join/19%3ameeting_ZDFhZTEzYTgtMzQ4Zi00MTU0LWJjYjgtOTlkNGI2NTM0ZTFk%40thread.v2/0?context=%7b%22Tid%22%3a%22d49ab9ea-99ec-4552-8651-bd94f79aa5e5%22%2c%22Oid%22%3a%22ca1619a8-83c3-42bf-b979-0db783564050%22%7d**

Panel Discussion 2: The Great Resignation: What must Leaders do to Encourage Workers to Stay? From the Field to the Office

During the past year, there has been the "Great Resignation" from the field to the office across America. Companies and employers must continue to ask, "how can we retain our best workers and talents and not burn people out?" Smart companies and employers must become more sensitive to the needs of employees in order to keep employees interested in staying on the job. For a starter, companies and employers must create a culture of well-being by offering mental health support to employees. It is important for employers to invest in employees' professional development, embracing an experimenter's mindset, build the right culture for remote teamwork, develop a change in mindset and be innovative in motivating workers, and to show empathy as a leader and employer. It has been predicated that during 2022 and beyond, remote working will be the next big leading trend for organizations worldwide.

https://teams.microsoft.com/l/meetup-join/19%3ameeting_OWRkOTFhODAtOTE1OS00YWZiLTlkM2MtMGI0M2QwNGNmNzNm%40thread.v2/0?context=%7b%22Tid%22%3a%22d49ab9ea-99ec-4552-8651-bd94f79aa5e5%22%2c%22Oid%22%3a%22ca1619a8-83c3-42bf-b979-0db783564050%22%7d

BOWIE STATE UNIVERSITY GRADUATE RESEARCH WORKSHOP 2022

Abstract 1:

TEACHERS' PERCEPTION: INTEGRATION OF TECHNOLOGICAL TOOLS IN TEACHING MATHEMATICS TO FOURTH GRADE STUDENTS IN FIVE SCHOOLS IN A MID-ATLANTIC STATE

PRIMARY AUTHOR: Oluseun Holmes

This qualitative phenomenological study will explore teachers' perceptions of the integration of technological tools in teaching mathematics to fourth-grade students. This study will be governed by Bandura's social cognitive theory and Piaget's constructivism theory. The four research questions that will guide this research are: (a) How do elementary teachers describe their perceived knowledge and preparedness to integrate technological tools in the teaching of mathematics to fourth graders? (b) How do teachers feel about the integration of technological tools in the teaching of math in elementary schools? (c) How do teachers perceive students' effectiveness in using technological tools? (d) How does the role of institutions impact teachers' preparedness in integrating technology in the teaching of mathematics? The researcher will utilize an instrumentation tool, used in a previous qualitative study, like this proposed study.

The researcher will interview 10 fourth-grade math teachers and use reliable software to code and transcribe results into themes, to identify and understand perceptions affecting teachers' integration of technological tools. It is anticipated that the study will provide evidence allowing educational leaders to gain insight into actionable strategies for effective and appropriate professional development Additionally, this study will enhance teachers' positive attitude toward the integration of technological tools in teaching fourth-grade mathematics, which will impact student achievement.

Abstract 2:

PRINCIPALS' LEADERSHIP STYLE IN CORRELATION TO TEACHERS' JOB SATISFACTION, TURNOVER, AND THE IMPACT ON STUDENT ACHIEVEMENT.

PRIMARY AUTHOR: Ernese Lawson Walters

The proposed quantitative study will examine middle school principals' transformational and transactional leadership styles to consider if any, the correlation to job satisfaction and turnover in middle school teachers, and the impact on student achievement. Researchers assert student achievement is the proximate cause of the principal and teacher relationship. The sample population will be comprised of middle school teachers from the largest school system in a Mid-Atlantic state, and the 14th largest school system in the United States. The targeted participants of the study will be 212 teachers from three 6-8 grade middle schools. Mind Garden Inc. an independent psychological publishing company of leadership assessment materials will compile survey questions and host the online survey for the participants. It is anticipated the findings of the study could convey new leadership insights for the district administrators of the Mid-Atlantic school system, as well as for the middle school principals and teachers of each school. The mutual objective of the researcher, principals, and teachers is to develop longer lasting professional relationships that could enhance the culture of the school and help to develop stable learning environments that support student achievement. Furthermore, if there are findings that express a positive or negative degree of correlation of the variables, it could be relevant for principals as predictors during the process of recruiting, hiring, and retaining new teacher staff. Finally, it is anticipated the study will add to the current body of knowledge of principals' leadership styles with a specific focus on middle school level educators.

Abstract 3:

EDUCATION: ONLINE LEARNING VS CLASSROOM LEARNING
PRIMARY AUTHOR: Adeola Oshiyemi

What is education?
This can simply be explained as facts, ideas and skills that have been learned either formally or informally.
Education lays the foundation for almost everything carried out by humans. You will never see a man who does something without being educated on it.
For example, we have those in the professional field. They didn't just wake up to become an expert in that field. They were educated on it and groomed perfectly.
Types of Education
We have earlier mentioned the types of education we have... there are only two of them and they are:
Formal Education
Informal Education.
Formal Education: This is the most recognized form of education in the world. This form of education goes on to build people into various professions.
The lawyers, doctors, teachers, and engineers wouldn't be without the formal education.
Informal Education: This is another form of education that though isn't so recognized, is used by almost everyone.
Parents teach their children morals. Parents teach their children simple house chores, these are informal Education and are vital as well.
The difference is that formal education goes on to form the Career of someone while informal education forms the characters and qualities of people.

Abstract 4:

MOBILE APPLICATION TO DETECT BRAIN TUMOR, LUNG CARCINOMA, BREAST CANCER AND COVID-19 FROM MAGNETIC RESONANCE IMAGING AND ULTRA SOUND IMAGING USING ARTIFICIAL NEURAL NETWORKS

PRIMARY AUTHOR: Tanviben Patel

Breast cancer affects one out of every eight women. Lung carcinoma affects an estimated 235,760 people according to the National Cancer Institute in the United States. COVID-19 can induce pneumonia and, in the most severe cases, ARDS (acute respiratory distress syndrome). At the same time, detecting a brain tumor, lung carcinoma, breast cancer, and Covid-19 via medical imaging is a challenging problem. During cancer surgery, intraoperative diagnosis is critical for providing safe and effective care. Computer vision applications based on artificial intelligence are widely used in a variety of medical treatments. According to a Health research, 90 percent of health care departments in the United States use computer vision for examining and scanning medical photographs in their clinical centers.

In this study, we have used a Deep Neural Network to create a model with high accuracy. We have employed four datasets 1) Covid-19 chest X-ray images 2) Dataset of Breast ultrasound images 3) Chest CT scan images dataset 4) Brain Tumor MRI scan images to train our model and experiment with different Artificial Neural Networks, such as the residual neural network (ResNet), the Very Deep Convolutional network (VGG), and the Convolutional Neural Network (AlexNet). We hypothesis that using Covid-19 chest X-ray images we will be able to predict Covid-19 negative, Covid-19 positive and Viral Pneumonia. We also hypothesis that using breast ultra sound we will be able to predict if the tumor is Malignant, Benign or normal. Our methodology involves incorporation of testing datasets and trained model for testing. We compare the accuracy of the models after using several Deep Leaning strategies. We have exported the model using CoreML and utilized it to create a mobile application. We have created an iOS mobile application for this study to make the model easier to use. The use of advanced computer vision-Neural Network algorithms for medical imaging for various cancer and Covid-19 detection is a novel addition of this study. In one mobile application, you may find three types of cancer imaging as well as Coivd-19 imaging detection with higher accuracy rate than previous studies.

Abstract 5:

BUILDING A RECOMMENDER SYSTEM FOR NASA'S PLANETARY DATA SYSTEMS SMALL BODIES NODE

PRIMARY AUTHOR: Syltinsy Jenkins

This research is an extension of last year's Frequent Keyword Analysis. The research has advanced from using word frequencies to using the OpenAI API for improved results. The presentation will introduce the OpenAI API and discuss the development of a research model and system architecture of the recommender system that is currently being constructed.

Abstract 6:

THE INSURGENCE OF COMPUTER THREATS AND COMBATING WITH SYSTEM INTELLIGENCE; THE WAR AND THE FIGHT OF CYBER THREATS

PRIMARY AUTHOR: Jerry Diabor

The computer security and the war to combat ransomware over a period of time has grown ever more than before as there are multiple attacks, well-orchestrated ones, of course, moving from opportunistic attacks to targeted attacks. This has been a target to both public and private firms falling prey to these attacks. Businesses are forced to pay money to these cybercriminals ransom money for an attack and others refuse to pay losses for their data worth hundreds of millions of dollars. Interestingly, ransomware is a major cyber threat to businesses or enterprise systems as this cannot be overlooked.

This paper addresses the ransomware development or growth and the various tactics adopted by cyber-attack frameworks and also moves towards the economic and technical impacts or effects. We also try to postulate the attack model and the cascaded model design to an ordinary business system environment. This paper will provide a model for security state ransomware attacks from unknown sources to the redefined destination where there is a depiction of breaches of data confidentiality, integrity, and availability.

However, this paper tries to categorize and structure the virulence of ransomware coupled with a proposed algorithm composition framework that will deal with file loss or deletion and encryption attack composition. The grouping will show the level of severity of the attack, CAT1 to CAT5 indicating the methodological dexterity and the effectiveness of retaining encrypted data without paying ransom money. The assessment shall be pinned on WannaCry attacks cases and provide necessary mitigation plans or tactics and provide a best practices recommendation on these models.

Abstract 7:

AR-DETECT- OBJECT DETECTION MOBILE AUGMENTED REALITY APPLICATION INTEGRATED WITH GLOBAL POSITIONING SYSTEM

PRIMARY AUTHOR: Dinali Jaawardana

Object detection in combination with augmented reality provides efficient results for various technology platforms [2]. Object detection is a computer vision technique that identifies and locates a certain object within the environment [1]. The objective of this research is to build a mobile augmented reality (AR) platform where bio-medical students would be able to use this platform to enhance their knowledge on lab instruments. The biology lab in BSU consists of 40-50 lab instruments. We hypothesis that there is a need in Bowie State University to help students identify and contrast between the lab equipment in the biology laboratory located in the Natural Science department. Especially students who are coming into this field as newbies, this mobile AR platform would assist in efficiently detecting the lab instruments and displaying the name of the lab instrument as well as the usefulness of it. The proposed mobile augmented reality application also integrates a guided navigation system where users can use it to get directions to various destinations on campus at Bowie State University. The various destinations are different buildings and departments on campus. This mobile augmented reality application will assist the students and visitors on campus to efficiently navigate the campus. In terms of methodology the mobile AR application was designed using Unity Game Engine and Vuforia Engine for object detection and classification. Google Map API was integrated for GPS integration in order to provide location-based services. Moreover, it uses a multi-player platform to provide the users with an enhanced learning experience and interactivity using Augmented Reality.

During the research conducted, the biology majoring and minoring students were used as the sample size to conduct evaluation of the mobile AR platform. The students provided positive feedback after given the opportunity to test the beta version of the mobile AR application. The functionalities of the mobile application received high user satisfaction as per the performance as well as usability and ease of navigation as per the evaluation conducted. In conclusion, the mobile AR platform provides the solution to new biology majors to get comfortable with efficiently identifying the existing biology instruments in the laboratory at BSU. It was identified that no such platform exists within BSU. Hence, this mobile AR platform caters to the niche market based on the selected target audience (biology major's/biology minors). Future research will incorporate providing a similar platform for chemistry and physics lab at BSU as well as adding more functionality to better understand the lab instruments.

The author would like to express her sincere thanks and gratitude to her research advisor, Dr. Sharad Sharma, Professor in Computer Science for his support on this project. Gratitude is extended to him for his guidance and mentorship in completing this project. Also, I would like to acknowledge Tanviben Patel for the support given to complete this project.

Abstract 8:

A BOLD NEW APPROACH: PREPARING OUR TRAINERS TO COUNSEL IN DUAL PANDEMICS

PRIMARY AUTHOR: Genevieve Yaeger

Bowie State University Building Online Learning Disciplines Parent Initiative (BSU BOLD) was designed to address the dual pandemics of COVID-19 and racial/social justice through a holistic lens that recognizes that stress and trauma can negatively affect the brain and body (Bremner, 2006). In addition, this initiative wanted to address the reality that these dual pandemics were disproportionately impacting the African American community at a higher rate (Vasquez, 2020). This research was a qualitative investigation on the impact of using a curriculum rooted in mediated learning strategy (MLE) and social-emotional learning (SEL) on school-aged African American children and families. It focused on the qualitative experiences of 5 BSU graduate student trainers who designed a counseling curriculum using MLE and SEL that would be used to lead weekly student sessions with school-aged children. Before counseling, graduate students attended several hours of trainings hosted by BSU school psychology program's professors and MLE/SEL experts.

Abstract 9:

UNDERSTANDING FETUS PSYCHOLOGICAL DEVELOPMENT USING THE DIATHESIS-STRESS MODEL THROUGH A PSYCHOEDUCATIONAL GROUP COUNSELING APPROACH.

PRIMARY AUTHOR: Michael McGee

When reviewing how trauma affects human development, stage theorists like Sigmund Freud, Erik Erikson, and Jean Piaget have all associated the beginning stages of observation to human behavior at birth (Crandell et al., 2012) p 34,36, and 46. However these well know stage theorist does not consider the gap in human development that starts before birth to conception. According to a Washington DC psychotherapist, (Libby, 2010) the gap before birth can create psychological issues for the unborn child due to the mother's social environment while pregnant which begins the process of psychological development. The goal of this paper is to fill in the gap of development where mothers can gain trauma focused training and continue adequate sustained growth and development utilizing mindfulness techniques to control the amount of stress in the mother's social environment. How young is too young to engage small children and parents in trauma focus training? What are the parameters when addressing a mother's needs, or expectations when it comes to environmental stressors? With the world in disarray, can we start the process of trauma focused training when the infant is in the womb? To answer the above questions, the writer will work with African American mothers whose children are still in utero. The writer will study the effects that the "Diathesis-Stress Model" (Colodro-Conde et al., 2017) has on the growth and development of the fetus. Starting in the womb, the writer will propose ongoing interventions in a psychoeducational group setting for mothers who are currently pregnant, starting at 20-25 weeks to 36 weeks of the baby's development. The goal is to address depression, anger management, hopelessness, and anxiety while helping expecting mothers to build coping skills and control the amount of stress the fetus is experiencing through the mother's social environment. Through a psychoeducational support group, the facilitator can educate and assist in creating skills and abilities for expecting mothers, by using an eclectic therapeutic approaches like; Gestalt, Adlerian, and Cognitive Behavioral Therapy (CBT); with intervention techniques, such as mindfulness training, catching oneself, encouragement, and acting as if; to combat and sustain unwanted behaviors and irrational thoughts that could affect gene expression and epigenetic changes, brain development, and the nervus system of the unborn fetus (Seo et al., 2021).

BOWIE STATE UNIVERSITY GRADUATE RESEARCH WORKSHOP ABSTRACT REVIEWERS

Dr. Hoda El-Sayed
Dr. Ann Hilliard
Dr. Adrian Krishnasamy
Dr. Sharad Sharma
Dr. Daryl Stone

GRADUATE RESEARCH WORKSHOP COMMITTEE MEMBERS

Dr. Cosmas U. Nwokeafor, Dean-The Graduate School
Dr. Mathias Mbah, Asst. Dean-The Graduate School
Dr. Sharad Sharma, Chair-GRW, Professor, Department of Computer Science
Dr. Ann Hilliard, Associate Professor Department of Educational Leadership
Dr. Hoda El-Sayed, Professor, Department of Computer Science
Dr. Euwanna Heard, Assistant Professor, Department of Nursing
Dr. Andrew H Mangle, Assistant Professor, Dept. of Management Information Systems
Ms. Alexis Campbell, Graduate Research Workshop Planning Lead

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Dr. Otis Thomas
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Dr. Hyacinth Anucha
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Donna Morgan

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