



University of Fairfax Newsletter

UF Cyber Bytes

Volume-01 (Fall 2023)

Greetings University of Fairfax/ANU Community and friends,

It is my pleasure to introduce our first newsletter published twice annually and later quarterly to keep you all informed about our academic programs and updates, important events, scholarly activities, stories that matter in academic world, research, community engagements, industry partnerships, collaboration with other educational institutions, and stories about our students / faculty / alumni etc. At UF, we have an outstanding academic portfolio that includes undergraduate, graduate, and doctoral programs in information technology, cybersecurity, Computer Science & Engineering, Software Development, and Business Administration. Your feedback and contribution to this publication is highly appreciated. - Dr. Varma, President/UF

Message from the Chief Academic Officer

The University of Fairfax (UoF) is an accredited rising star in distance education. Our goal is to offer talented individuals worldwide the opportunity to pursue affordable, high-quality undergraduate or graduate studies in various disciplines. Our experienced faculty members, small class sizes, and low student-to-faculty ratio enable us to contribute significantly to address the shortage of qualified professionals in diverse range of fields, from business administration to software development, cybersecurity, cloud computing, and computer science and engineering. With its growing body of local and international students, UoF is dedicated to fostering continuous improvement to efficiently meet its students' academic goals and job market needs.



Dr. S. Khorsandroo,
Ph.D. (Computer Science),
Chief Academic Officer (CAO),
University of Fairfax
Research Interest: Cybersecurity,
Artificial Intelligence & Machine
Learning, Self-running Networks,
Programmable Network Infrastructure.

University of Fairfax - Academic Portfolio - Doctoral Programs

1. Ph.D. in Computer Science and Engineering - program designed to provide opportunities for applied research in Computer Science body of knowledge.
2. Doctorate in Information Assurance (DIA) - program designed to create through advanced research cybersecurity solutions from practitioner's perspective.
3. Doctorate of Business Administration (DBA) - program designed to prepare students for corporate leadership in complex business environments.
4. Doctorate of Software Development

Student Spotlight Doctorate candidate - Information Assurance / (DIA)

Col. Jeff Steinlage is a seasoned professional with a proven Information Technology track record and over 21 years of leadership experience in the Army. He has held several high-level management positions, such as Program Director, Chief Information Officer, and Security Force Consultant. Jeff has managed over \$150 million in projects and hundreds of personnel. He works as an IT manager with Centerra, a contractor for the Department of Energy.

Jeff says "The University of Fairfax has prepared me to begin my studies as a doctoral candidate in Information Assurance (Cybersecurity). My goals with this program are to use the lessons learned to keep my networks secure and pursue teaching other Information Assurance professionals in the future."

(DSD) - program designed to research and implement software processes in organizations with complex business systems.



B.S. (Criminal Justice)
M.A. (Project Management)
M.A. (Computer Information System)
Certifications:
Project Management Professional (PMP)
Certified Lean Six Sigma Yellow Belt
DNPP Certified Digital Networking - Professional (CDN-P)
Scrum Master Certified (SMC)
Certified Digital Networking Professional

University of Fairfax Bytes: We use Canvas as Learning Management System and all terms are either 8-weeks or 16-weeks (Residency) long.

**Feature Article (Contributed by Dr. Godlove, Ph.D. Cybersecurity)
Faculty Perspective: The Doctoral Journey**

Navigating Effort and Selecting a Purposeful Dissertation Topic

Finishing a doctorate requires significant effort, commitment, and dedication. It is a long and challenging academic journey that typically spans several years. The level of effort needed to complete a doctorate can vary based on factors such as the specific field of study, the nature of the research, the individual's prior academic background, and the university's program requirements.

Selecting the right dissertation topic is a critical step in a doctoral journey. The process should begin early, allowing students to explore potential research areas and reflect on their interests and aspirations. Early engagement with faculty advisors, conducting a literature review to identify gaps, and seeking feedback from peers and mentors are essential. Here are some key aspects that contribute to the level of effort required:

1. *Time Commitment:* Pursuing a doctorate is a time-consuming endeavor. Doctoral programs often involve coursework, comprehensive exams, and extensive research.

2. *Research and Scholarship:* A critical component of a doctorate is conducting original research. This involves designing research studies, gathering data, analyzing findings, and contributing new knowledge.

3. *Writing and Dissertation:* The dissertation is a substantial and original scholarly work demonstrating a doctoral candidate's research capabilities.

4. *Literature Review:* Doctoral candidates must engage in an extensive literature review to understand the existing body of research in their field. This involves reading and analyzing numerous scholarly articles and publications to contextualize their research.

5. *Faculty Mentorship:* Doctoral candidates often work closely with faculty advisors or mentors. Regular meetings and collaboration with mentors are essential for guidance, feedback, and support throughout the research process.

6. *Perseverance and Tenacity:* The doctoral journey can be challenging, with obstacles and setbacks. Perseverance, tenacity, and a passion for the subject matter are essential for overcoming hurdles and staying motivated.

7. *Work-Life Balance:* Balancing the demands of a doctorate with personal and professional commitments can be daunting. Doctoral candidates must prioritize time management and self-care to maintain a healthy work-life balance.

Earning a doctorate is a rigorous and intellectually demanding process that demands high effort and dedication. However, the sense of accomplishment and the opportunity to make meaningful contributions to one's field of study make the journey immensely rewarding for those who pursue it.








**Tim Godlove, Ph.D.
(Cybersecurity)**



Dr. Tim Godlove is a CIO within the Department of the Navy and an adjunct faculty at UF. His portfolio includes Chief Information Officer Program and Information Assurance Certification at the National Defense University, and Senior Navy Aide/Protocol Officer for the Chairman of the Joint Chiefs of Staff.

University of Fairfax Bytes

The best AI chatbots: ChatGPT and other noteworthy alternatives

	The new Bing Best AI chatbot overall	View at Microsoft
	ChatGPT Best original AI chatbot	View at ChatGPT
	Jasper Best AI chatbot for businesses and marketers	View at Jasper
	YouChat Best AI chatbot for a ChatGPT alternative	View at YouChat
	Chatsonic by Writesonic Best AI chatbot for news content creators	View at Writesonic
	Socratic by Google Best AI chatbot for kids and students	View at Google Play Store
	HuggingChat Best open-source chatbot	View at Github

ChatGPT is only one of the many increasingly popular chatbots. Our picks for the best AI chatbots and writers can lighten your workload by writing emails and essays.

<https://www.microsoft.com/en-us/edge/launch/newBinginEdge?form=MW00X7>

<https://openai.com/blog/chatgpt>

<https://www.jasper.ai/>

<https://you.com/search?q=who+are+you&tbm=youchat>

<https://writesonic.com/chat>

https://play.google.com/store/apps/details?id=com.google.socratic&hl=en_US&gl=US&pli=1

<https://desktop.github.com/>

University of Fairfax Bytes: Certification & Accreditation

Distance Education Accrediting Commission (DEAC)
 State Council of Higher Education for Virginia
 Kentucky Council on Postsecondary Education
 Commission for Independent Education, Florida Department of Education
 Student Exchange Visitor Program (SEVP)
 State Authorization Reciprocity Agreements (SARA)



University of Fairfax Academic Programs Practitioners' Skills Enhancement: Amazon Web Services Academy at UF

Courses available:

Academy Data Analytics
 Academy Data Engineering
 Academy Cloud Architecting
 Academy Cloud Developing
 AWS Academy Learner Lab

Note: Students can now earn 100% discounted AWS Certification exam vouchers.

AWS ACADEMY

CompTIA + TestOut Team Up

University of Fairfax Academic Programs Practitioners' Skills Enhancement: CompTIA & TestOut Certification

Certifications available ...

Cyber Defense Pro
 Digital Literacy
 Ethical Hacking
 Linux
 Client / Server
 Office - Excel/Word - Advanced
 Networking
 Routing and Switching
 Security Pro
 IT Fundamentals

CompTIA + TestOut

UF Accolades

Excellence in Residency Dr. James Webb

Dr. Webb's approach to residency courses is unique. He introduces students to Amazon Web Services (AWS) expansive ecosystem, unraveling its perplexing array of services and applications which provide the pulse for today's digital world. From here, his residency class dives deeper, elucidating the infrastructural intricacies of cloud-based storage, serverless computing, and machine learning platforms. The incorporation of AWS, not as a mere tool but as an intricate component of our overall curriculum design, illuminates the enigma of cloud technologies in our progressively digitized society. - Dr. Webb



James O. Webb, Jr., Ph.D.
 Senior Professor, University of Fairfax

Dr. Webb is a senior faculty at the University of Fairfax. He has held several administrative and academic positions including the Dean both at UF and American National University. He is certified Cloud Practitioner and AWS Academy Accredited Educator. His approach to residency classes is very innovative and productive.



Dr. Azad Ali at the InSITE (Informing Science and Information Technology Education) 2023 conference

Azad Ali, D.Sc., Professor of Information Technology. He has more than 35 years of combined experience in areas of financial and information systems.

Dr. Ali presented the paper on July 5th, 2023 titled "Into the Challenges of Aligning Key Sections of Doctoral Dissertations: Cognitive Analysis, Pedagogical Tools, and Instrument Development" at InSITE international conference.

The InSITE conference was held virtually on July 5-6, 2023. It is hosted by the Informing Science Institute (or ISI <https://www.informingscience.org/>) to have educators meet, present their papers, to collaborate with others and to network with other like-minded people. Our paper titled "*Into the Challenges of Aligning Key Sections of Doctoral Dissertations: Cognitive Analysis, Pedagogical Tools, and Instrument Development*" was fast tracked and published at the International Journal of Doctoral Studies (<http://ijds.org/Volume18/IJDSv18p137-171Ali9379.pdf>). Attendance at this conference is multinational with attendees from various countries around the world, such as US, Australia, Israel, England, Ireland, Poland, Lebanon, Egypt, Bulgaria and many other countries. They represent different universities and meet in this conference to present their research, to learn from other educators' presentations or to network with other educators who attend the conference.

**Meet UF Admissions Team
Hard at Work!**

**Director of Admissions
University of Fairfax
Monica Bansal, Ph.D.
Business administration
DBA candidate at UF
MBA (Business)
MBA (Finance)**



Admissions Representatives University of Fairfax



Eniola Oladimeji

Admissions representative of UF from Nigeria. Currently enrolled in a master's program in information technology at UF.



Hameed Yousuf

Admissions representative of UF from Dubai. Currently enrolled in master's degree in computer science and engineering at the University of Fairfax.



Jumana Al-Zainal

Admissions representative of UF. Currently enrolled in MBA program at the University of Fairfax.



Mahdia Twinkle

Admissions representative of UF from Bangladesh. Currently enrolled in MSc in Information Technology program at the University of Fairfax.



Nirav Savaj

Admissions representative of UF.



Shinebayar Tserenjamts

Admissions representative of UF.

Publications & Panel Discussion

[International Journal of Doctoral Studies](https://www.informingscience.org/Journals/IJDS/Articles)
(<https://www.informingscience.org/Journals/IJDS/Articles>)

Paper published: "[Writing Doctoral Dissertation Literature Review: Identifying the Prerequisites, Corequisites, and the Iterative Process for Writing the Literature](#)", Volume 17, 2022, pp. 433-458,
<https://doi.org/10.28945/5026>

Authors: Azad Ali, Shardul Pandya, and Umesh C. Varma



[International Journal of Doctoral Studies](https://www.informingscience.org/Journals/IJDS/Articles)
(<https://www.informingscience.org/Journals/IJDS/Articles>)

Paper published: "[Into the Challenges of Aligning Key Sections of Doctoral](#)

Summary: Writing the literature review chapter of doctoral dissertations presents unique challenges. Students waste a lot of time identifying material to write, and the experience is generally that of frustration and time delay. This paper reviews literature to identify levels of information helpful for writing the literature review chapter: prerequisites, corequisites, and iteration process. Writing a doctoral dissertation literature review is long and complicated because some students delve into the writing without much preparation. Identifying what is helpful before and during the writing and being mindful of the repetitive steps helps guide the students through the writing of the literature review chapter of doctoral dissertations.

<https://www.informingscience.org/Publications/5026>

Summary: The purpose of this study was to introduce an instrument that contains a set of exercises intended to help doctoral students align the key sections of their dissertation document. The exercises are developed after providing cognitive analysis of the factors that

Dissertation: Cognitive Analysis, Pedagogical Tools, and Applied Exercises", Volume 18, 2023, pp. 137-171, <https://doi.org/10.28945/5116>

Authors: Azad Ali, Shardul Pandya, and Umesh C. Varma

make aligning these key sections challenging to many, and after discussing pedagogical tools that can be used to address these challenges. A methodological approach to aligning the sections of a doctoral dissertation is crucial for the resulting treatise to be coherent and present a unified purpose that threads through each chapter consistently. We recommend that doctoral students follow the exercises we introduced in the instrument provided in this paper or take other similar approaches. Without such an approach, aligning the key sections of a doctoral dissertation will be challenging, the dissertation writing process will be more complicated, and the time necessary to complete it will lengthen. <https://www.informingscience.org/Publications/5116>

Authors

	<p>Azad Ali, D.Sc., Professor of Information Technology has more than 35 years of combined experience in areas of financial and information systems. Dr. Ali's research interests include service-learning projects, web design tools, dealing with writing doctoral dissertations, and curriculum development. Azad has been involved in mentoring doctoral students to complete their doctoral dissertations.</p>
	<p>Shardul Y. Pandya, Ph.D. Dr. Pandya retired from Capella University, where he served as Core Faculty and Sr. Doctoral Dissertation Advisor with the School of Business, Technology, and Healthcare Administration. Dr. Pandya has worked and consulted at various manufacturing organizations, as well as in the areas of Data Mining and Database Marketing. Approximately, 20 doctoral students have successfully defended their dissertations under his supervision.</p>
	<p>Umesh C. Varma, D.I.A. Dr. Varma has more than 35 years of teaching experience in higher education at undergraduate, graduate, and doctoral levels in Information Technology, Computer Information Systems, Computer Science, Cyber Security, and Information Assurance. Currently, he serves as a President of the University of Fairfax. His research interests are Cyber Security Intelligence analytics, anti-forensics, covert channel analysis, query optimization, Cloud architecture, AI/ML, and complex data structures.</p>

Panel Discussion



USCYBERCOM Academic Engagement Network Faculty-Only Workshop (16 AF/AFCYBER Hosted), 8 and 9 Aug

August 9, 2023: Dr. Varma participated in the Panel discussion at USCYBERCOM Academic Engagement Network Faculty-Only Workshop (16 Air Force/AFCYBER Hosted). Discussion: Autonomous AI - Military Cyber Requirements (Faculty), Panelists - Alex Liu (UT Austin), Alvaro Cardenas (UCSC), Mike Navicky (Mississippi State University), **Umesh Varma (University of Fairfax)**, Topics: Policy, Security, Priorities, Ethics, and Data Authenticity.



UTSA NATIONAL SECURITY COLLABORATION CENTER RESEARCH ☆ EDUCATION ☆ WORKFORCE DEV

National Security Collaboration Center

Creating a robust national security and intelligence driven *R&D, Education, and Workforce* ecosystem leveraging government-university-industry partnerships.

nsc.utsa.edu

Meet New University of Fairfax Faculty

Dr. Jack Li

Ph.D., Computer Science, Texas A&M University
 M.S., Computer Science and Engineering, Shanghai Jiaotong University - Shanghai, P. R. China
 B.S., Mechanical and Electronic Engineering, Jingdezhen Ceramic University - Jingdezhen, P. R. China, September

Positions held:

- Assistant Director of Information Technology
- Adjunct Professor
- Senior Lead Software Applications Developer
- Senior IT Manager
- Senior Software Developer
- Data Analyst
- Software Engineer

Skills/Programming Languages/Applications

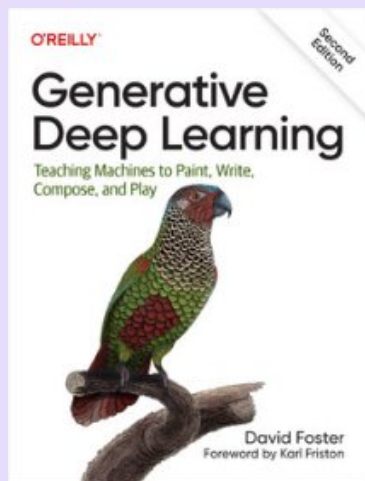
C#, SQL, JavaScript, REST, Java, Microsoft SQL Server, C++ APIs, Python, ASP.NET, Software development, Agile, Linux, Entity Framework, .NET Core, Back-end development, Git, WCF, TFS, DevOps, SDLC, System design, OOP, Test-driven development, C/C++, MySQL, Application Development, XML, Data analysis, OLAP, Data mining, PostgreSQL, SSIS, ETL, Business Requirements, Bootstrap, T-SQL, Data Warehouse, HTML5, Test Cases, AWS, Jira, SSRS, Web development, CSS, Web Services, Node.js, User Interface (UI), Scripting, Project management, Scrum.



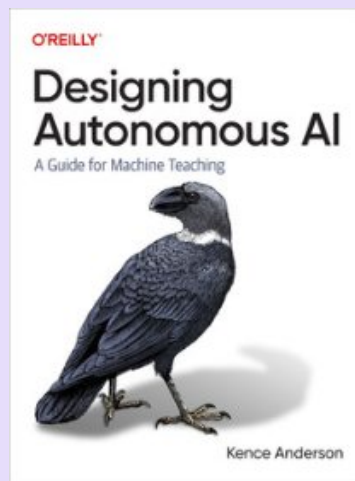
Certifications and Licenses:

Certified ScrumMaster (CSM), ITIL v3, SnowPro Core Certification, PMP

Book Reviews ... UF Reading Room



Generative Deep Learning, 2nd Edition
 David Foster, Released May 2023
 Publisher(s): O'Reilly Media, Inc.
 ISBN: 9781098134181



Designing Autonomous AI
 Kence Anderson, Released June 2022
 Publisher(s): O'Reilly Media, Inc.
 ISBN: 9781098110758

Generative AI is the hottest topic in tech. This practical book teaches machine learning engineers and data scientists how to use TensorFlow and Keras to create impressive generative deep learning models from scratch, including variational autoencoders (VAEs), generative adversarial networks (GANs), Transformers, normalizing flows, energy-based models, and denoising diffusion models.

Early rules-based artificial intelligence demonstrated intriguing decision-making capabilities but lacked perception and didn't learn. AI today, primed with machine learning perception and deep reinforcement learning capabilities, can perform superhuman decision-making for specific tasks. Book shows how to combine the practicality of early AI with deep learning capabilities and industrial control technologies to make robust decisions in the real world.

Generative Deep Learning

Designing Autonomous AI

Fall Term Begins

Fall Term 2023 – (23FA1) Course Session 1A
 August 18, 2023 New Student Application Deadline
 August 28, 2023 Course Session Begins
 October 22, 2023 Course Session Ends

Fall Term 2023 – (23FA3) Course Session 1B
 August 18, 2023 New Student Application Deadline
 August 28, 2023 Course Session Begins
 November 2, 3, 4, 5 Term B Residency Dates
 December 17, 2023 Course Session Ends

Student Resources

Mission of University of Fairfax

The mission of the University of Fairfax is to offer flexible, in-demand distance education programs that meet the needs of employers and students in a changing global marketplace. The University designs quality programs that foster critical thinking, effective communication, and collaboration in career-focused disciplines. The programs offer students practitioner-focused curricula that advance applied knowledge and research in applicable contemporary career fields.

<https://ufairfax.edu/university/about-mission-history/>

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Campus Locations

1813 East Main Street Salem, VA 24153

8203 Valencia College Lane Orlando, FL 32825

4205 Dixie Highway Louisville, KY 40216

540.654.7949 / www.UFairfax.edu

For questions and comments, please email cao@ufairfax.edu

