

Danny J. O’Leary
Curriculum Vitae

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EDUCATION

Ongoing

2023 Ph.D., Industrial and Systems Engineering, Auburn University (4.0 GPA)
Planned Timeline: Propose Summer 2022, Defend Spring 2023

Completed

2021 Graduate Certificate, Modeling for Data Analytics and Operations (4.0 GPA)
2020 Master of Engineering Management, Systems Engineering, Auburn University (4.0 GPA)
1992 Bachelor of Science, Mechanical Engineering, Auburn University

PUBLICATIONS

Web-Based Publications

2020 Project / Teaching Blog, *Antisimplistic*: aub.ie/BlogPortfolioLinks

Other Publications

2016 45 videogames released with major publishers (1994 – 2016); Co-Founder, n-Space, Inc.
2009 US Patent 7,497,779, *Video Game Including Time Dilation Effect*; Inventor
1997 Elliott, S. D. (1996). *Inside 3D Studio Max*. New Riders Pub.; Contributing Author

SELECTED AWARDS AND HONORS

2021 Inducted into Phi Kappa Phi honor society
2020 Semi-Finalist, Simio Student Simulation Competition, May (9 of 333)
2020 Inducted into Tau Beta Pi, Epsilon Mu Eta and Alpha Pi Mu honor societies
2020 Outstanding Master’s Student, Auburn University Graduate School (13 of 2,620)
2019 Outstanding Master’s Student, Industrial and Systems Engineering (1 of 79)
2019 3rd Place, Tiger Cage Business Idea Contest, \$4,000
2015 Electronics Entertainment Expo (E3), 15 awards including three Best of Show
2012 Profiled, Auburn Engineering Magazine, “It’s My Job”
2011 William C. Schwartz Industry Innovation Award, Metro Orlando EDC
1998 PlayStation “Shooter of the Year” award from Sony Interactive Entertainment

GRANTS AND FELLOWSHIPS

Pending

- 2022 Good Jobs Challenge, U.S. EDA, *Modernizing and Accelerating Advanced Industrial Manufacturing Education with Mixed Reality Instruction*
\$16M proposed 2/22, Drs. Gregory Harris (PI), Lewis Payton (Co-PI), Auburn University
Coordinated and co-created the proposal, named Project Manager pending award

Awarded

- 2020 MegaGrant, Epic Games, *Backster 2.0: Next Gen. Visual Tool for Ergonomic Assessment*
\$25,000 awarded, Dr. Richard Seseke (PI), Auburn University
Identified funding source, co-drafted the proposal, assisted with project strategy
- 2020 MegaGrant, Epic Games, *AR/VR-Based Training in Lean Manufacturing*
\$25,000 awarded, Dr. Konstantinos Mykoniatis (PI), Auburn University
Identified funding source, facilitated discussions, and contributed to proposal

INVITED TALKS

- 2022 *The Metaverse: More Direction than Vision*, Air University, May TBD
- 2021 *Game Changer: The Emergence and Potential of Real-Time 3D Development Platforms*,
Air University, November 17th
- 2021 *Game Development to Visualization Research in 25 Years: Real-Time Graphics and the Epic MegaGrant Program*, MGMWERX and AUix, July 23rd

CONFERENCE PARTICIPATION

- 2015 Moderator and Speaker, “Entertainment Panel,” Florida Simulation Summit, National Center for Simulation, September 16th
- 2013 Speaker, “Independent Game Development,” GameTech Conference, National Center for Simulation, April 17th

CAMPUS TALKS

- 2022 *Introduction to Version Control Using Git*
Presented to the INFORMS Auburn student chapter, March 2nd
- 2021 *Data Science Career Roundtable*
Recruited six participating companies from a variety of industries, including SAIC, Shipt, Encompass Health, and IERUS; organized, hosted, promoted and moderated, March 30th
- 2020 *AI and Machine Learning Concepts*
Presented to the Data Science Society of Auburn, November 9th
- 2020 *Real-Time Visualization and the Epic MegaGrant Program*
Presented to Industrial and Systems Engineering Faculty, July 13th, and again to the members of its Advanced Manufacturing Research Group, July 28th

Graduate Research Assistant

2019 ≈ 2021

Thomas Walter Center for Technology Management (TWC)

Collaborated with TWC Director to manage, administer, and support programs related to product development, innovation, and engineering management, especially in high-tech.

- Redesigned curriculum for three classes in Business-Engineering-Technology Minor and integrated hands-on project work where students earn five makerspace certifications
- Benchmarked TWC programs against 50+ relevant offerings at peer / aspirant institutions
- Prepared for and conducted on-site interviews at UF, UCF, GA Tech, NCSU, and Duke
- Created background briefs for visits to the Universities of Michigan and Texas (Austin)
- Interfaced with regional directors of National Science Foundation's I-Corps program and the Department of Defense's National Security Innovation Network
- Developed goals and timeline for the College of Engineering's Product Innovation Institute, the Dean's five-year, \$30M vision pitched to high-level donors
- Contributed to DHS proposal for Exec MBA focused on Security Technology Transition
- Identified and promoted Epic MegaGrant as valuable new research funding pool (\$100M)
- Drafted successful partnering proposal for Georgia Tech's 2020 I-Corps NSF solicitation
- Co-drafted TWC proposal for AU Mission Enhancement Fund (\$300K), not awarded
- Established ongoing relationship with Air University, leading to multiple collaborations

Student, Master of Engineering Management

2019

Industrial and Systems Engineering

Survey of Machine Learning Methods using Python and Scikit-Learn

- Capstone project. Advised by Dr. Jeffrey Smith.

STUDENT MENTORING

Miller Parker, Graduate Teaching Assistant, Master of Engineering Management

Alex Barras, Undergraduate Research Assistant, Computer Science & Software Engineering

SERVICE TO PROFESSION

Advisor, Developing Airmen with Games (DAWG), AUix and Innovatrium (2021 – Present)

Instructor, National Science Foundation's Innovation Corps (NSF I-Corps) (2020 – Present)

Lecturer, Advisor, and Student Team Judge, Florida Interactive Academy at UCF (2004 – 2016)

Guest Speaker and Accreditation Stakeholder, Full Sail University (1998 – 2020)

UNIVERSITY SERVICE

Judge & Advisor, Tiger Cage Business Idea Contest, New Venture Accelerator (2021 – Present)

Treasurer, INFORMS, Auburn University Student Chapter (2021 – Present)

Faculty Advisor, Epsilon Mu Eta, Auburn University Chapter (May 2021 – Present)

Director of Career Programming, Data Science Society of Auburn (2020 – 2021)

Founder & President, Epsilon Mu Eta, Auburn University Chapter (June 2020 – 2021)
Advisor, BluePrintPal student team, Tiger Cage Business Idea Contest Finalist (2019 – 2020)
Advisor, SafeBoard student team, Tiger Cage Business Idea Contest Semifinalist (2019 – 2020)
ISE Department Ambassador, Council of Engineering Graduate Students (2019 – 2020)
Mentor and Guest Speaker, TigerDev student organization (2018 – 2020)
Volunteer, Southeastern Raptor Center, College of Veterinary Medicine (2017 – 2018)

ADDITIONAL TRAINING

2020 NSF I-Corps South Instructor Academy, Georgia Institute of Technology, May 13-15

RELATED PROFESSIONAL SKILLS

Programming / Query Languages: Python, SQL, R, C#, VBA, AMPL
Major Packages / Plugins: NumPy, Pandas, Scikit-Learn, fast.ai, @Risk
Software Carpentry: git, bash / zsh, docker, markdown, LaTeX
Simulation, Modeling, and Real-Time 3D: Simio, Unity, Mixed Reality Toolkit (MRTK)
AR/VR Hardware: Microsoft HoloLens 2

NONACADEMIC WORK

- 2020 Founder and President, GUNSTRUCTION, Inc. (2012 – 2021)
Direct a distributed team of 3-5 experts in developing and marketing an innovative 3D product configurator for mobile, tablet, and web; top 200 Entertainment app for 5+ years
- Sold to 2nd Adventure Group, holding company for the largest online firearms retailer
 - Establish, sustain quality standard – average 4-star rating on iOS, 600+ reviews
 - Grow market & engagement – over 500K downloads, 8M interactions/month
 - Build and nurture partnerships – nearly 150 licensed manufacturers and retailers
 - Developed, maintained custom analytics system – delivers custom monthly reports
- 2016 Co-Founder and CEO, n-Space, Inc. (1994 – 2016)
Led, managed, grew one of the world's most resilient independent game development studios – 45 games on 12 platforms with 20+ partners, selling 10+ million units worldwide
- Created award-winning studio capable of adapting to wide-ranging market demands, delivered games for various demographics in 9 genres, budgets \$300K to \$12M+
 - Oversaw production, defined methods, directed artists, engineers, designers, and production managers over 4 generations of console hardware, 6 game engines
 - Directed hundreds of concepts and business proposals, pitched to publishers and investors, negotiated deals, secured contracts with up to 20 other proposals
 - Established n-Space as dependable, high-value partner, on-time / budget > 90%, building long-term relationships with partners including Activision, Nintendo, Disney
 - Built and protected a tight-knit culture with average tenure over 7 years (2-3x norm) in an industry with highest turnover rate in technology (15.5%)

- Led through adversity, including 2008-9: 2x growth in 9 months (peak of 122 staff on 7 teams), lost CEO to cancer, recession, aborted acquisition, 60% layoff, rebuilding
- 1994 Training Exercise Designer, GE Aerospace (1993 – 1994)
 Authored training scenarios, built 3D models, visual effects as contract employee to the Simulation and Training group, then a world leader in real-time 3D rendering
- Member of core development team for “Desert Tank” arcade game with SEGA Japan
 - Parlayed that experience into meetings with Sony, funding the birth of n-Space

SELECTED NONACADEMIC PROFESSIONAL SERVICE

Advisor, Orlando Mayor Buddy Dyer, Economic Development Commission Leadership Mission, Cite de Multimedia, Montreal research trip for Orlando’s Creative Village (2008)

TEACHING AREAS

Innovation, Entrepreneurship, Customer Discovery, Leadership
 Product Design and Development, Prototyping
 Engineering Economics, Project Management
 Python, R, and Software Carpentry for Scientific Computing
 Probability & Statistics, Data Science, Machine Learning
 Simulation and Visualization
 Unity and AR/VR Development

PROFESSIONAL MEMBERSHIPS

Institute of Industrial and Systems Engineers (IISE)
 The Institute for Operations Research and the Management Sciences (INFORMS)
 American Society for Engineering Management (ASEM)
 Association for Computing Machinery (ACM)
 Project Management Institute (PMI)
 Product Development and Management Association (PDMA)

ACADEMIC REFERENCES

John Evans, Ph.D.
Department Chair, Industrial and Systems Engineering
Director, Thomas Walter Center for Technology Management
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