Curriculum Vitae

1. **DATE:** 17 September 2020

2. **NAME:** DONOVAN, JORDAN, T.

3. **PRESENT TITLE:** COMPUTER SCIENTIST

4. **GRADE:** Senior

5. **ORGANIZATIONAL LOCATION:**
   U.S. Army Engineer Research and Development Center
   3909 Halls Ferry Road
   Vicksburg, MS 39180

6. **EMAIL ADDRESS:** Jordan.t.donovan.cs@gmail.com

7. **TELEPHONE:** (office) 601-634-4624; (mobile) 601-988-3575

8. **WORK EXPERIENCE:**

U.S. Engineer Research and Development Center, Vicksburg, MS *2015 - Present*

- Robotic Integrated Engineer Operations (RIENO)
  Classification Team lead *2018 - Present*
    - Develop machine learning algorithms (primarily CNNs) and visualization tools (metrics as well as layer activations)
    - Perform analysis and improve performance of classification algorithms using metrics and techniques from recent research
    - Identify and apply potential optimization techniques for classification algorithms (specifically for real-time classification)
    - Record techniques and results for publication and presentation
    - Present findings at professional venues
    - Provide neural network visualization expertise to data analytics and robotics teams (specifically NN node activations and optimized inputs)
    - Identify and optimize machine learning design (NN architectures and processes)
    - Train fellow employees in utilization of machine learning frameworks and standards
    - Facilitate business development workshops

- Co-lead of the Mobile Computing Team *2015 - Present*

- Develop mobile applications, application programming interfaces, websites, and databases for mobile applications
- Oversee and direct team on mobile application design
- Communicate with and adapt workflows of customer to mobile application
- Manage contracts within team
- Identify and remedy user connectivity and functionality for mobile applications

9. EDUCATION:

a. Universities attend, years attended, degrees obtained (with dates)

- Mississippi State University (December 2019), M.S., Major: Computer Science
  GPA: 3.7
- University of Mississippi (May 2015), B.S., Major: Computer Science
  GPA: 3.2

b. Other Training and Awards (with agency and year attended)

- Ludobots – Evolutionary Robotics Simulation (online by Dr. Josh Bongard, 2020)
- Data Science in Python (ITL, 2019) (Certificate received)
- CES Foundation (ITL, 2019)
- NVIDIA Deep Learning for Visualization (ITL, 2019) (Certificate Received)
- NVIDIA Deep Learning for Natural Language Processing (ITL, 2019) (Certificate Received)
- Introduction to Deep Learning (ITL, 2018)
- Introduction to TensorFlow (ITL, 2018)
- Introduction to Deep Reinforcement Learning (ITL, 2018)
- USACE CIO Information Management / Information Technology (IM/IT) Technical Support Team of the Year (ITL, 2018)
- Technical Writing (ITL, 2018)
- Technology Transfer (ITL, 2017)
- Dynamic Presentation Skills (ITL, 2017) (Certificate Received)
- FEMA Certificate of Appreciation for Hurricane Response Efforts (ITL 2017)
- Security + (ITL, 2016) (Certificate Received)
- Dept. of the Army Achievement Medal for Civilian Service (ITL 2016)
- Leadership Development Program – Myers-Briggs, Presentation Skills, StrengthsFinder, Emotional Intelligence, Situational Leadership, 7 Habits, Managing Multiple Priorities (2019 – present)

10. PROFFESSIONAL OR TECHNICAL SOCIETIES/ORGANIZATIONS:

a. Graduate/Professional Memberships

- Association for Computing Machinery
- Autonomous Cyber Security Learning Group

b. Undergraduate Memberships

- Engineering Student Body
- Provost Scholar
- Engineering Scholar
- Mississippi Eminent Scholar Grant Recipient
- Agile Software Engineering Fellowship
- Honor Society Member

11. TECHNICAL PRESENTATIONS:

- "Real-time Material Segmentation for Robot Operations" RD20 Pecha Kucha-Style presentation. Virtual, October 2020.
- "Real-time Material Segmentation for Robot Operations" Data Science Workshop Poster Session. Virtual, August 2020.
- "FEMS data collection with MICA" ERDC HQ FEMS Demo. Vicksburg, MS, January, 2020.
- "Material Classification for Robotic Integrated Engineer Operations" ITL Symposium Poster Session. Vicksburg, MS, November, 2019.
- "CESAT Mobile Demo" Customer Visit and Technology Demo. Vicksburg, MS, October, 2019.
- "Understanding State-of-the-art Material Classification Through Deep Visualization" *Mississippi State University MS Thesis Defense.* Mississippi State, October 2019.
- "Real-time object and material classification for Robotic Integrated Engineer Operations" *Robotic Integrated Engineer Operations FY 19 Closeout.* Vicksburg, MS, September 2019.
- "Mobile Computing Impact and Growth" *Gains in Education of Math and Science II.* Vicksburg, MS, July 2019.
- "Impact of Mobile Computing in the DoD" *University of Louisiana at Monroe Tour.* Vicksburg, MS, March 2019.
- "Utility of Mobile Applications: Mobile Information Collection Application" *ERDC Tour for Great Lakes and Ohio River Division.* Vicksburg, MS, February 2019.
- "Mobile Computing Across ERDC" *Innovation Alley*. Vicksburg, MS, August 2018. (Need to find presentation and date)
- "Mobile Information Collection Application (MICA)" *Little Rock District Data Collection Info Session.* Little Rock, AR, June 2018.

- "Hurricane Relief Efforts: A Developer's Story" *Science, Technology, Engineering Workshop.* Vicksburg, MS, March 2018.
- "Utility of Mobile Applications: Blueroof Field Management System" *ERDC Executive Conference Room Briefing.* Vicksburg, MS, November 2017. (Need to finalize date)

12. PROGRAMMING LANGUAGES, SOFTWARE, AND OPERATING SYSTEMS:

- SQL
- C#
- Python
- R
- HTML
- Javascript
- Java
- Microsoft SQL Server Management Studio
- Visual Studio
- IIS
- Apache
- Jupyter Notebook
- Caffe
- Pytorch
- TensorFlow
- Qt
- XCode
- Vim
- Git
- Window OS
- Linux OS
- Mac OSX

13. PUBLICATIONS:

- Donovan, J. (2019). "Understanding State-of-the-art Material Classification Through Deep Visualization." MS Thesis
- Donovan, J. (2019). "Understanding State-of-the-art Material Classification Through Deep Visualization." *ERDC Library,* RIENO.
- Donovan, J. (2019). "Material Classification for Robotic Integrated Engineer Operations." ERDC Library, RIENO.
- Donovan, J. (2020). "Real-time Material Classification in ROS with Materials in Context Dataset." ERDC Library, RIENO. (Need to finalize)
- Donovan, J., Pettitt, J. "Mobile Information Collection Application: User Manual" *ERDC Library,* MICA.
- Donovan, J., Pettitt, J. "Mobile Information Collection Application: Installation Manual" *ERDC Library,* MICA.

14. ADDITIONAL INFORMATION

- Github: https://github.com/jdonovanCS
- Webpage: http://jordandonovan.com
- LinkedIn: https://www.linkedin.com/in/jordan-donovan-ab2083194