Dominic Critchlow

Senior Product Manager, Data Scientist, and Software Engineer with 9+ years of experience developing products from academic research to nationally recognized Artificial Intelligence (AI) efforts. Leads teams of 60+ engineers at the Department of Defense (DoD).

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EXPERIENCE (9+ Years)

Office of the Secretary of Defense, The Pentagon — Senior Product Manager, GS-15

JUNE 2019 - PRESENT

- Search Portfolio Manager, Responsible for building and managing a portfolio of products empowering search across the entire Department of Defense.

- Director of Incident Response in the Office of the Chief Digital and AI Officer (~60 Engineers), developing products and insights for the Chairman of the Joint Chiefs of Staff and the Secretary of Defense. The team supports 24/7 Operations globally across all Combatant Commands.

- Co-Creator and Product Manager of Gamechanger (~30 Engineers), an AI effort supporting evidence-based policy decision-making recognized by the National Security Commission for AI 2021. https://github.com/dod-advana

- Senior Data Scientist for the first CDO of the Department of Defense (DoD), developing Data Science capabilities and capacities at the DoD. Effectively leading the Warfighting & Warfighting Support Agency Portfolio in a data-centric approach to implementing a 5 percent cost reduction.

- Influencing Data Science career options at the Pentagon and the federal government by contributing to the "1560 Data Scientist" Job Series. Developing the DoD Data Strategy and the follow-on Data Strategy implementation plans.

U.S. Army Reserve, Military Intelligence Readiness Command — *Military Intelligence Officer*

DECEMBER 2020 - PRESENT

- Battalion Assistant S6

- Leading Defensive Cyber Operations Teams

Booz Allen Hamilton, Norfolk, VA — *Data Scientist*

OCTOBER 2017 - JUNE 2019

- Lead Technical Data Science/Machine Learning Products for the Air Force, Marine Corps, Navy, and NASA. Developing Applications for distributed computing infrastructures. **(Python, Spark, Fortran)**

SKILLS/PROFICIENCIES

Operating in ambiguous and high-stakes environments.

Creating customer-focused applications with high impact from scratch.

Effectively leading large engineering teams using Agile Software Development practices.

A strong technical communicator at all stages of the product development lifecycle.

Managing and contracting projects with budgets up to **$10M/year**.

Proficient in Python, Spark, JavaScript, React, Docker, C/C++, C#, and Fortran, with limited experience in others.

LANGUAGES

Native English and German Speaker

U.S. DoD CLEARANCE

Top Secret/Sensitive Compartmented Information

Academic Research, Various Locations

MAY 2013 - OCTOBER 2017

– Data Scientist at National Aeronautics and Space Administration(NASA) High Altitude Balloon Research and Development Lab **(Python)**

– High Altitude Balloon Team Lead at Austin Peay State University (https://youtu.be/Z30EtqZ8Pkw) **(Python, C#, Linux)**

–Data Scientist at the University of Notre Dame with a focus on Graph Theory Application on Social Media Network, see publication **(Python, C)**

– Theoretical Physicist at Vanderbilt University with a focus on crystalline structures, see publication. **(Python, C++)**

– Materials Engineering Intern at Georgia Institute of Technology focusing on Metal Matrix Nanocomposites

Publications:

Vipin Vijayan, Dominic Critchlow, and Tijana Milenkovic (2017), **Alignment of dynamic networks**, Bioinformatics, in press. Also, arXiv:1701.08842 [cs.SI]

Marvinney, Claire; ... Critchlow, Dominic; ... Pantelides, Sokrates; Haglund, Richard; (2018) Effect of Material Structure on Photoluminescence of ZnO MgO Core-Shell Nanowires. Wiley

EDUCATION

Austin Peay State University, Clarksville TN — *B.S. Physics, B.S Computer Science*

AUGUST 2013 - MAY 2017

- Academic Researcher on High Altitude Balloons, building hardware and software flight instrumentation. **(Python, Linux, Arduino, C, Fortran)**
- 2017 Winner of the Robert F. Sears Physics & Astronomy Award
- 2016 Student Government Senator of the Year

Old Dominion University, Norfolk VA

AUGUST 2018 - DECEMBER 2019

Computational & Applied Mathematics Graduate Courses

(Python, Matlab)

Army Officer Candidate School, Ft. Benning GA — *Commissioned Officer*

JANUARY 2022

Distinguished Military Graduate