# Joseph Raymond Cole

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Employability: U.S. Citizen, Veteran
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## QUALIFICATIONS AND SKILLS

Image processing/computer vision professional with expertise in machine learning
C/C++, Python, Matlab, Cuda, Labview, assembly, and DSP programmer
Strong technical writing and presentation skills

## EMPLOYMENT

*Mar. 2021 – Jan. 2024:* **Staff Engineer - Ultrasound**, YorLabs, Inc.
  - Lead developer for beamforming and image processing algorithms to implement B, color doppler, and pulse wave doppler ultrasound modes
  - Demonstrated system performance both in lab and during two animal trials which led to successful closing of Series B and C investment rounds

*Jul. 2019 – Mar. 2021:* **Cofounder and Chief Technology Officer**, Koioc, Inc.
  - Applied machine learning and statistics algorithms to improve local document search

*Jan. 1997 – Sep. 2019:* **Major (Retired)**, U.S. Army Reserve
  - Direct supervisor responsible for the health, welfare and morale of eleven soldiers
  - Provided oversight and coordination of all communications and IT needs of an Expeditionary Brigade (~700 Soldiers)

*Mar. 2012 – Jan. 2017:* **Senior Algorithm Developer**, Applied Materials
  - Designed algorithms using SVM classification, self-organizing maps/k-means unsupervised clustering, design guided edge detection, noise segmentation, principal component analysis, registration, etc.
  - Analyzed algorithmic gaps at customer site to focus R&D efforts, earning Employee of the Quarter award (Q3, 2012)

*Oct. 2009 – Jul. 2011:* **Staff Seismic Imaging Geophysicist**, CGGVeritas
  - Applied signal processing algorithms and wave propagation theory to process seismic data

*Aug. 2002 – Dec. 2008:* **Graduate Research Assistant**, Rice University
  - Designed algorithms in Matlab and C++ to characterize and model nanoparticles
  - Designed, machined, and constructed experimental apparatuses using optical components, electronics, and high vacuum equipment

*Feb. 2001 – Jul. 2002:* **Associate Engineer**, Northrop Grumman, Corp.
  - Designed missile flight prediction algorithms for National Missile Defense infrared satellites

## EDUCATION

*2016-2020*   Graduate Certificate in Statistics,
    Portland State University
*2006-2008*   Doctor of Philosophy, Applied Physics, Department of Electrical Engineering
    Rice University
*2002-2006*   Master of Science, Applied Physics, Department of Electrical Engineering
    Rice University
*1998-2000*   Bachelor of Science, Electrical and Computer Engineering,
    University of Texas at Austin

## HONORS AND AWARDS

F. S. Cater Prize in Mathematical Sciences
NASA Graduate Student Researcher Program Fellowship
Earned Bachelor's Degree in 2.5 Years
Eagle Scout Rank