

Teddy Koker

CONTACT

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<https://teddykoker.com>
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EDUCATION

Worcester Polytechnic Institute, Worcester, MA

B.S., Computer Science

Sep 2016 – Dec 2019

3.69/4.0 GPA. Senior thesis focused on applications of machine learning to social network graphs to predict future connections. Completed coursework in statistics, probability theory, machine learning, and computer architecture.

PROFESSIONAL EXPERIENCE

Harvard Medical School, Boston, MA

Machine Learning Research Associate

Dec 2019 – Aug 2020

Conducted research within the Image and Data Analysis Core. Created deep learning model to detect manipulation of microscopy images. Proposed a novel approach to biomedical image retrieval.

OpenMined, <https://openmined.org/>

Research Engineer (Volunteer)

Mar 2020 –

Working within a small group researching privacy-preserving and interpretable image segmentation, with a focus on applications in healthcare.

Analog Devices Incorporated, Boston, MA

Research Engineering Intern

May 2019 – Aug 2019

Researched and implemented a state-of-the-art inertial navigation system for use in autonomous transportation. Assisted in other projects within the Autonomous Transportation group involving radar and lidar algorithms.

Part-Time Software Engineering Intern

Sep 2017 – Apr 2018

Created software to analyze products' data sheets and highlight potential security risks. Results were then presented at an internal conference.

Software Engineering Intern

Jun 2017 – Aug 2017

Wrote software for internet-connected agricultural sensors that is currently deployed in farms across the world.

PUBLICATIONS

T.E. Koker, S.S. Chintapalli, S. Wang, B.A. Talbot, D. Wainstock, M. Cicconet, M.C. Walsh. On Identification and Retrieval of Near-Duplicate Biological Images: a New Dataset and Protocol. Under review.

T.E. Koker and D. Koutmos. 2020. Cryptocurrency Trading using Machine Learning: A Technical Note. Journal of Risk and Financial Management.

PROJECTS

Personal Writing, <https://teddykoker.com>

Deep Learning for Guitar Effect Emulation, 15,000+ page views

May 2020

NLP from Scratch: Annotated Attention, 1,000+ page views

Feb 2020

Beating the Odds: Machine Learning for Horse Racing, 10,000+ page views

Dec 2019

Trading with Reinforcement Learning, 6,000+ page views

Jun 2019

Momentum Strategy from "Stocks on the Move", 12,000+ page views

May 2019

Simulating Historical Performance of Leveraged ETFs, 2,000+ page views

Apr 2019

PROGRAMMING EXPERIENCE

Languages: Python, C, C++, Rust, HTML, CSS, Javascript, Java, \LaTeX
Server Technology: Docker, PostgreSQL, AWS, Jupyter Notebook, ROS
Libraries: PyTorch, Tensorflow, Scikit-learn, Flask, D3