

# Garrett Wolfe

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## EDUCATION

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**M.S. Artificial Intelligence** Jun 2022  
University of California San Diego

**B.S. Computer Science** Jun 2020  
University of California Irvine, Cum Laude, GPA 3.88

**Google's DeepMind Fellowship Scholar** Sep 2020 - Jun 2022

**Coursework:** Natural Language Processing, Machine Learning, Probabilistic Reasoning, Recommendation Systems, Operating Systems, Data Structures, Databases, System Design, Requirement Analysis, Object Oriented Programming

## EXPERIENCE

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**Blue River Technology** (subsidiary of John Deere, autonomous farming equipment) Jun 2021 - Sep 2021  
*Machine Learning Engineer, Intern*

- Created self-supervised object detection infrastructure consolidating a 4-person task and establishing baselines to prevent object collisions for autonomous equipment
- Implemented image similarity algorithms to reduce oversized training and validation datasets by 92%
- Worked cross-functionally with team members to develop scalable Auto ML pipeline
- Met with stakeholders and assessed their needs in the field, informing design of image labeling schema and performance requirements

**Big Purple Dot** (Real Estate Customer Relations Management) Jan 2020 - Oct 2020  
*Full Stack Developer, Intern*

- Designed, prototyped, and developed a new messaging feature in collaboration with stakeholders, increasing adoption and boosting user confidence
- Resolved concurrency issues from database transactions eliminating scheduled job failures
- Created RESTful APIs using Test Driven Development in Ruby on Rails framework
- Onboarded and mentored new employees expediting integration into the team

## PROJECTS

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**COVID-19 Severity Classifier** - *Pytorch, Pandas* Jun 2021

- Created classifier to predict the likely severity of covid infections using peptide frequencies
- Identified 11 key peptides from set of 100,000 as targets for future research
- Overcame small dataset, noisy and missing data, and severe imbalance of number of parameters to samples

**Reinforcement Learning Path Finder** - *Numpy, Jupyter Notebook* Dec 2020

- Created a reinforcement learning algorithm from-scratch facilitating intelligent navigation of a non-deterministic environment
- Implemented using both policy iteration and value iteration cementing ML fundamentals

**UNITE App** - *C++, Sqlite* Dec 2019

- National Science Foundation sponsored project to provide ubiquitous medical monitoring with wearable IoT devices for pregnant mothers in underserved communities using state-of-the-art ML methods
- Optimized sensor data collection on Samsung Gear smartwatch improving battery life by 20%
- Implemented local database for sensor data storage to enable statistical analysis, feature extraction, and machine learning on edge devices

## SKILLS

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**Languages:** Python, C++, Java, Ruby, Javascript, C, SQL, HTML, CSS, jQuery, Assembly

**Tools:** Pytorch, Numpy, Jupyter Notebook, Pandas, Scikit Learn, Sklearn, AWS, Weights and Biases, Android Studio, Git, Ruby on Rails, Visual Studio, Selenium, Chrome Developer Tools

**Methodologies:** Agile, Kanban, Scrum