# Mark Zimmerman

Mzimm003@gmail.com - Cell: (916) 662-6126

## **Projects:**

# GEORGIA INSTITUTE OF TECHNOLOGY Atlanta, GA

Aug 2021 - Present

#### OpenAI's Gym based Football Game

- Multi-agent reinforcement learning exploration.
- Ablation study integrating concepts of COMA (Counterfactual Multi-Agent) methods with PPO (Proximal Policy Optimization).

# OpenAI's based Lunar Lander

- Single-agent reinforcement learning exploration.
- Study of hyperparameter impact for Q-learning agent with replay memory, using neural net as a Q approximator.
- Opportunity to gain experience in efficient use of hardware including multiprocessing with CPU and committing vectorized environment, vectorized replay memory, and neural net training calculations on the GPU.

#### Raven Progressive Matrix Solver

- Knowledge-based artificial intelligence exploration.
- Pattern recognition agent, rivaling human capability, using techniques of computer vision, statistics, ensemble learning, and metacognition.

## Work Experience:

# UNIBAIL RODAMCO WESTFIELD Los Angeles, CA

Oct 2013 - Jul 2021

#### Senior Recoverable Revenue Accountant | Jan 2017 – Jul 2021

- Create and expand on existing tools in excel to provide for faster, more accurate analysis, review, and calculation processes. Provide documentation and training to support the utilization of these 10+ tools.
- Provide training for all job facets from the technical to the analytical for 50+ persons since 2017, including new team members, entire departments after reorganization, and contracted parties abroad.
- Prepare analyses and summaries for upper and executive management to inform multi-million dollar business decisions.
- Engage IT in the development and testing of process improvements, reducing manual workloads by 100+ hours.
- Engage the legal department in considerations for policy improvements impacting 1,000s of tenants.
- Lead various ad hoc projects providing expectations for junior members, reviewing their work, and facilitating the adoption of the project's results by the business.
- Review cycle work done for 40+ properties and 1,000s of abstractions of tenant agreements into JD Edwards E1 performed by junior team members.
- Perform all described below for "Recoverable Revenue Accountant".

### Recoverable Revenue Accountant | May 2015 – Dec 2016

- Abstract, and maintain, the appropriate expense recovery terms into JD Edwards E1 from dozens of tenant agreement forms (lease, amendment, easement, etc.) for 1,000s of tenants.
- Provide primary support and expertise in researching, resolving and responding to 100s of tenant correspondence related to Recoverable Revenues via a JIRA ticketing system.
- Assist Center Management, Regional Analyst, Regional Finance Directors, and Shared Services
  with requests and questions relating to Recoverable Revenues.

- Responsible for the calculation of Recoverable Revenues for 1000s of tenants each for of 3 cycles (Reconciliation, Forecast, Recharge).
- Achieve metric targets as appropriate.
- Identify and implement process improvements.
- Attend and participate in team meetings.
- Responsible for assisting the team on ad hoc projects, reports, analysis, and other assignments.

### AR Specialist | Oct 2013 – May 2015

- Maintain 1000s of mall tenants' ledger's accuracy through thorough research and analysis.
- Communicate discrepancies in billings and payments received intelligibly and diplomatically.
- Collaborate interdepartmentally and with peers to achieve the above for over a thousand tenants at once.

#### **Education:**

## GEORGIA INSTITUTE OF TECHNOLOGY

Atlanta, GA

- Ongoing Master's in Computer Science Machine Learning
- Expected graduation: December 2023
- Current GPA: 4.0/4.0

### EL CAMINO COLLEGE

Torrance, CA

- Attended Supplementary Computer Science and Technology classes
- Preparation for Master's program no credential obtained

### UNIVERSITY OF CALIFORNIA, LOS ANGELES EXTENSION

Los Angeles, CA

• Completed Certificate of Accounting

### UNIVERSITY OF CALIFORNIA, RIVERSIDE

Riverside, CA

- Studied Computer Science for a year
- Completed Bachelor of Science in Mathematics

#### **Skills:**

Languages: Python, C++, Java, C#

Libraries: NumPy, PyTorch, Ray.RLLib, Sklearn, MatPlotLib, Gym, Pandas, Pillow, OpenCV

Technologies: Visual Studio, VS Code, Git, Anaconda, Docker, Unity, Jupyter Notebooks, CUDA, LaTex,

Inkscape, Linux, Windows, Microsoft Office

Studies: General Artificial Intelligence, Game AI, Knowledge-based AI, Reinforcement Learning, General

Machine Learning, Human Computer Interaction, AI Ethics, Human Computer Interaction