Mark Zimmerman

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Summary: Passionate, dedicated, and technical individual pursuing a Machine Learning Engineer role to reflect not the roles pursued in the past, but the innovative way those roles were approached.

Projects:

PERSONAL   Jan 2024 – Present
  Deepchess
- Constructed a PyTorch based, deep learning model with automated feature engineering.
- Compiled and preprocessed millions of data points to support training on relevant examples provided by experts.
- Designed a distributed system providing a scalable training process with ray.
- Maintained an easily upgraded training environment with git version control.

GEORGIA INSTITUTE OF TECHNOLOGY   Aug 2021 – Dec 2023
  Object Detection on BDD100k dataset
- Implemented and trained state of the art object detection (DINO) using PyTorch architecture.
- Cooperated with a team to support DINO implementation with foundational models.
- Collaborated to solve problems of training limitations (e.g. memory and compute time limitations), diagnostics (e.g. deep learning model information propagation), and performance.
- Scheduled training via Google cloud computing services
  OpenAI's Gym based Football Game
- Implemented the training pipeline of a Multi-agent reinforcement learning environment.
- Documented iterative improvement of the training algorithm by an ablation study.
- Analyzed agent ability by visualization of converging learning curves and improved teamwork metrics.
  Raven Progressive Matrix Solver
- Engineered an AI agent able to solve RPM problems of size 2x2 and 3x3.
- Evaluated computer vision techniques and statistical analysis, then used ensemble learning and metacognition to blend the approaches and augment the agent's understanding of the problem.

Work Experience:

UNIBAIL RODAMCO WESTFIELD   Oct 2013 – Jul 2021
Los Angeles, CA

  Senior Recoverable Revenue Accountant | Jan 2017 – Jul 2021
- Designed an innovative system to automatically provide configuration of lease terms in accounting software for 70% of leases, increasing productivity.
- Built a data analysis tool to identify redundancy, decreasing budgeting work by 20%.
- Compiled and preprocessed thousands to millions of data points from numerical and textual sources to support analysis in daily and ad hoc workload.
- Collaborated with IT to develop and test process improvements.
- Communicated technical results of multi-million dollar business decisions plainly for executive management.
  Recoverable Revenue Accountant | May 2015 – Dec 2016
- Managed transactional and contractual data for 1000s of tenants.
- Supported Accounts Receivable, Center Management, Regional Analyst, Regional Finance Directors, and Shared Services with requests and questions relating to Recoverable Revenues.

  AR Specialist | Oct 2013 – May 2015
- Maintained 1000s of mall tenants' ledger's accuracy through thorough research and analysis.
- Communicated discrepancies in billings and payments received intelligibly and diplomatically.

Education:

GEORGIA INSTITUTE OF TECHNOLOGY   Atlanta, GA
- Completed Master's in Computer Science - Machine Learning

UNIVERSITY OF CALIFORNIA, RIVERSIDE   Riverside, CA
- Completed Bachelor of Science in Mathematics

UNIVERSITY OF CALIFORNIA, LOS ANGELES EXTENSION   Los Angeles, CA
- Completed Certificate of Accounting

Skills:

Programming Languages: Python, C++, Java, C#
Libraries: NumPy, PyTorch, Scikit-learn, MatPlotLib, Pandas, Pillow, OpenCV, Ray
Technologies: VS Code, Git, Anaconda, Docker, Jupyter Notebooks, LaTex, Linux, Microsoft Office
Studies: Search Algorithms, Artificial Intelligence, Supervised Learning, Unsupervised Learning, Deep Learning, Reinforcement Learning, Algorithm Analysis