

Siddharth Verma

✉ siddharthverma314@gmail.com 🌐 siddharthverma314.github.io

Experience

Senior Machine Learning Engineer

🏢 Square 📍 Boston MA

📅 Sep 2022–Current

- Finetuned LLMs on merchant-buyer conversations to suggest replies to incoming messages
- Conducted A/B tests to analyze performance of different models in real-world usage
- Instruction finetuned LLMs to incorporate multiple downstream tasks into one large multi-task model

AI Resident

🏢 Meta (Facebook) 📍 Seattle WA

📅 Aug 2021–Sep 2022

- Wrote code to process terabytes of multimodal data using Rust, Apache Arrow and Parquet.
- Trained Large Language Models upto 13B parameters on large multi-node clusters with upto 64GPUs
- Designed large-scale scientific experiments to evaluate the capabilities of LLMs on downstream tasks

Machine Learning Intern

🏢 Apple 📍 Seattle WA

📅 Jun 2021–Aug 2021

- Implemented Transformer architecture from Attention is All You Need from primitive operations
- Trained the model on English-German translation and replicated results from the paper
- Optimized network architecture to support on-device edge compute

Undergraduate Researcher at Robotic AI and Learning Lab

🏢 Berkeley Artificial Intelligence Research Lab 📍 Berkeley CA

📅 Jan 2019–May 2021

- Performed cutting-edge research in chatbots, robotics and self-driving cars
- Advised by Prof. Sergey Levine and Prof. Chelsea Finn
- Research Areas: Deep Reinforcement Learning, Multi-Agent RL, Offline RL

Publications

Kelvin Xu*, **Siddharth Verma***, Chelsea Finn Sergey Levine (2020). *Continual Learning of Control Primitives: Skill Discovery via Reset-Games*. Published in NeurIPS 2020

Siddharth Verma, Justin Fu, Mengjiao Yang Sergey Levine (2022). *CHAI: A Chatbot AI for Task-oriented Dialog with Offline Reinforcement Learning*. Published in NAACL 2022

Siddharth Verma, Yuchen Lu, Rui Hou, Hanchao Yu, Nicolas Ballas, Madian Khabza Amjad Almahairi (2022). *Uniform Masking Prevails in Vision-Language Pretraining*. Preprint

Ping Yu, Tianlu Wang, Olga Golovneva, Badr AlKhamissi, **Siddharth Verma**, Gargi Ghosh, Mona Diab Asli Celikyilmaz (2022). *ALERT: Adapting Language Models to Reasoning Tasks*. Published in ACL 2023

Badr AlKhamissi, **Siddharth Verma**, Ping Yu, Mona Diab Asli Celikyilmaz (2023). *OPT-R: Enhancing Reasoning Capabilities of Large Language Models*. Published in ACL Natural Language Reasoning and Structured Explanations workshop 2023

Education

UC Berkeley

2017–2021

BA Computer Science & Music

GPA 3.965/4.0

Technologies: Pytorch, Pytorch Lightning, JAX, Docker, NixOS, SQL, Unix/Bash, Git, Google Cloud, AWS

Areas: NLP, Reinforcement Learning, Multimodal Learning, Machine Learning, Neural Networks, Statistics

Languages: Python, Haskell, Rust, Java, C, Go, PureScript, RISC-V, SQL