Shounak Ray

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Education

Stanford University **Stanford, CA**
Core: Bachelor of Science in Computer Science (BSc. CS), Psychology Minor *2021 – 2025*
Focus: Artificial Intelligence and Computer Systems; taking Masters and Ph.D. level courses
Coursework: ML/NLP/CV/RL, Human Cognition & Plasticity, Multi-Variable Calc., Data Structures
Organizations: Stanford Aikido, Stanford ASES, Stanford Student Space Initiative (SSI)

Work Experience

Stanford Intelligent Systems Laboratory (SISL) **Stanford, CA**
Research Assistant, Aeronautics and Astronautics Department *May 2023 – Present*
- *Architecting* framework utilizing latent diffusion embeddings to generate new out-of-dist. datasets
- *Improving* object detection through semi-supervised diffusion to generate driving sensor data in U.S.
- *Leading* application of generative AI and deep reinforcement learning (RL) to improve AV decisions in complex traffic scenarios, promoting AI safety in autonomous decision making under uncertainty
- *Co-authoring* two papers with Honda Research Inst., PI Mykel Kochenderfer for publication in *ICML*

Stanford Changing Cities Research Lab (CCRL) **Stanford, CA**
Research Assistant, Sociology Department *September 2022 – Present*
- *Developed* computer vision (CV) models (RNN, multi-task, ensembles, etc.) to parse Google Street View images to understand the role of physical conditions in structuring inequality and gentrification
- *Programming* regression and classification CV models to evaluate live videos of streets across U.S.A.
- *Co-authoring* paper with team, PI Jackelyn Hwang for publication in *Annual Review of Sociology*

Relativity-Text IQ (acquired) **Seattle, WA**
Product Management Intern – AI Team *June – September 2022*
- *Conducted* market sizing & competitive analysis for self-proposed product, secured leadership support
- *Roadmapped* 18-month product, engineering, and client-engagement timelines for proposed product
- *Prototyped* NLP clustering pipeline (able to rapidly cluster terabytes of documents for M&A due diligence and litigation events) and product UI, set to save millions of dollars (est.) in operational costs
- *Utilized* AutoML to reduce project costs by 20% and time by 40% (est.), interfacing with eng. team
- *Secured* prospects (e.g., JP Morgan, AstraZeneca, Intel, Bayer, etc.) to stress-test MVP via paid pilot

White Whale Analytics **Calgary, AB**
Data Science Intern *July 2020 – August 2021*
- *Programmed* scalable steam-optimization algorithms for energy clients, resulting in est. 30% savings
- *Engineered* customer journey optimization algorithms for hospitality providers, incr. sales by ~25%
- *Developed* network graph, anomaly-detection, and ML solutions for diverse Canadian clients
- *Secured* multiple long-term energy and hospitality contracts and maintained strong client relationships
- *Designed* intuitive dashboards for AI model explainability and gathered client trust in technology

Skills and Interests

Skills: Python, C/C++, PyTorch, JAX, CUDA, GPU-based HPC, cloud compute (GCP/AWS)
Interests: Parallel Proc., Generative models, LLMs, NLP/CV, RL, Entrepreneurship, Psychology

References

Tarun Singh – VP of Product, Relativity
tarun.singh@relativity.com
Robert Mereau – CEO, White Whale Analytics
mereau@whitewhale.ai

Milestones

ex-Section Leader for CS 41 at Stanford Univ.
Published Author/Researcher
Developing Context-Adaptive AI Framework

Awards and Recognition

Team Canada: Regeneron-ISEF
TreeHacks, Winner: VMWare Award
Canada-Wide Sci. Fair, Grand Award Winner