KANAV SINGLA

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SKILLS

Languages:	Python · SQL · JavaScript · React · Flask · C++
LLM Frameworks & Tools:	PyTorch · Hugging Face · LangChain · Pinecone · LlamaIndex · W&B
Developer Tools:	Git · Linux · AWS · Docker · conda · pip-tools · Jupyter

EXPERIENCE

Valsoft Trading Inc. | LangChain · Pinecone · PyTorch · Hugging Face · Llama Index — Montreal, QC
Founding AI Engineer — Jun 2023 - Present

- First employee of **Valsoft's AI Lab**, spearheading a team to integrate cutting-edge technologies like LangChain and LlamaIndex into M&A workflows
- **Crafted RAG-based sourcing tools** with Pinecone, setting a new industry standard for precision in M&A lead generation
- Leading end-to-end AI product development, from ideation to scalable deployment, elevating Valsoft's position as an M&A tech-driven acquisitions

Toronto Intelligent Systems Lab | PyTorch · Hugging Face · Docker · Linux — Toronto, ON
AI Research Assistant (Supervisor: Igor Gilitschenski) — Aug 2022 - Present

- Led research on online adaptation of Autonomous Racing cars for unseen environments contributing to my thesis
- Engineered an advanced, context-aware dynamics prediction pipeline leveraging SOTA transformers & LLMs in regards to building foundation models for control
- Strategically preparing research findings for potential publication at robotics conferences, CoRL & ICRA

Huawei Technologies Canada, Noah's Ark Lab | PyTorch · pandas · Docker · Linux — Toronto, ON
AI Engineer Intern, Autonomous Driving — Jun 2021 - Aug 2022

- Contributed to the implementations & patents for the planning stack of Huawei's Autonomous Driving System
- Implemented state-of-the-art end-to-end solutions from literature for prediction & planning in PyTorch
- Orchestrated runs on big data-sets & performed hyperparameter tuning to develop **4 different baselines**
- Developed modular simulation environments for training & offline evaluation of our models, **reducing** team's evaluation & testing times by **50%**

UofT, Dynamic Optimization Lab | Python · TensorFlow · Keras · ONNX — Toronto, ON
Machine Learning Research Fellow (Supervisor: Dr. Chi-Guhn Lee) — May 2020 - Aug 2020

- Developed a contraband detection pipeline for X-ray baggage scans using transfer learning on a private dataset
- Led analysis & testing of **object detection & classification models** to increase the pipeline's recall by **10%**
- Awarded with **UofT Fellowship Award** (valued at $10,000) for successful implementation of practical research
- Achieved real-time inference & **94% recall** for our pipeline deployed at the Seoul–Incheon Intl. Airport

NOTABLE PROJECTS

sMART - Student Mentorship App | HTML/CSS · React · Django · SQL

- Worked in a team on a mentorship service algorithm for university students
- Built a web app & launched a startup to reach over **1100+ views & 200 subscribers** in the first month
- Pitched at the **DMZ** to qualify amongst the **top 10%** companies for the Basecamp Lite Incubator Program

EDUCATION

University of Toronto — Toronto, ON
BASc. in Engineering Science (Robotics & Machine Learning Engineering) — June 2023

Achievements:	Multiple Dean's Honours List · Euclid International Math Contest Honour Roll (Ranked 13th)
Coursework:	**Full Stack LLM Bootcamp** · **CS25: Transformers United** · Natural Language Computing · Deep Learning & Neural Networks · Probabilistic Machine Learning · Control Systems