Vincentius Daniel Budidharma

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Education

University of California San Diego September 2023 - March 2027 (expected)

B.S. in Data Science, Minor in Economics and Mathematics, GPA: 4.0/4.0

- **Relevant Coursework:** Machine Learning (Linear Regression, Decision Trees, Random Forest), Deep Learning (Neural Networks, Transformers, Large Language Models), Database Management (SQL), IoT and Sensors, Probability & Statistics

Projects

Qwen Math Reasoning via QLoRA Knowledge Distillation March 2026 – June 2026

https://github.com/TurkiAlrasheed/MathLLM/tree/vllm-local-gpu

- Fine-tuned Qwen3-4B via QLoRA and teacher-student knowledge distillation using GPT-5.5 Pro, **improving benchmark accuracy from 50.3% to 80.2%** and **placing 3rd** in a class of 300+ students
- Optimized training and inference under constrained GPU memory via 4-bit quantization, gradient accumulation, task-specific prompt templates, and dynamic sequence length tuning

Nightwing May 2026

https://www.youtube.com/watch?v=uTr8ylWOaLg/

- Built an **autonomous rover** that fuses camera-based perception and distance sensor data to support real-time obstacle avoidance and 2D mapping, establishing a foundation for future SLAM implementation
- Deployed a **quantized YOLOv8 computer vision pipeline** for edge inference, detecting and counting user-specified objects

RoboRanger April 2026

https://devpost.com/software/roboranger

- **Won best Edge AI/ML** in a hackathon (350+ participants) by building a fully offline, portable, voice-enabled AI naturalist that identifies species and provides ecosystem explanations using on-device vision models
- Trained a **species classification CNN** on 17,000+ images of plants and animals, **quantized** to run on an Arduino UNO Q
- Greatly increased model accuracy when no species present (27% →83%) by building a dataset of negatives

Work Experience

Budget Analysis & Planning Intern (Analytics Engineering) Oakland, CA

UC Office of the President *June 2026 – September 2026*

- Building data pipelines and dashboards with the UCOP Budget Analysis & Planning Team

Data Science Intern San Diego, CA

Data Science Alliance *September 2025 – May 2026*

- **Automated 3+ hours of daily manual work** in a food bank serving 400k+ residents by a developing a vehicle routing optimization model (Python, OR-Tools), integrating demand data, capacity constraints, and Google Maps API travel times
- Built a React + FastAPI web interface enabling non-technical staff to easily generate optimized delivery schedules

Back-End Developer San Diego, CA

San Diego Zoo Wildlife Alliance *January 2025 – May 2026*

- Developed a React + Electron.js **model inference and data-labeling platform** used to annotate **15,000+ clips** from **630+ animal species**, accelerating development of multiple PyTorch bioacoustic classification models
- Designed and deployed a local SQLite database, including **RESTful API** endpoints and UI to execute CRUD operations

Data Science Tutor (Python & Java) San Diego, CA

University of California San Diego *March 2024 – Present*

- **Saved 10+ hours of manual work each quarter** by building a **Python-based grading ETL pipeline** to extract 200+ rows of data from various grading sources, calculate final scores, and report them in Canvas

Skills

Languages: Python, Java, SQL (SQLite, MySQL, PostgreSQL), TypeScript, JavaScript
Machine Learning/Data: scikit-learn, PyTorch, Pandas, NumPy, Spark
Tools: AWS (EC2, S3), Git/GitHub, Jupyter