Sarthak Bapte

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Position Applied: AI Scientist I (Healthcare)

EDUCATION

Oregon State University (OSU) — Corvallis, Oregon State, USA
Master of Science in Artificial Intelligence: GPA:3.51/4.0 — **September 2023 - December 2025**
Relevant Coursework: Natural Language Processing with Deep Learning (GenAI), Computer Vision, Machine Learning, Algorithms, Graph Theory.

BRACT's Vishwakarma Institute of Technology (VIT) — Pune, Maharashtra, India
Bachelor of Technology in Computer Engineering: GPA:8.84/10.0 — **August 2017 - June 2021**
Coursework: Data Science, Deep Learning, Image Processing, Probability & Statistics, Linear Algebra.

SKILL SUMMARY

- **Core Competencies:** Deep Learning, Generative AI, Computer Vision, Algorithms, Data Structures, Reinforcement Learning
- **Languages:** Python3, Java 8, C++, C #
- **Frameworks:** PyTorch, TensorFlow, Streamlit, CUDA
- **Libraries:** Numpy, Pandas, Matplolib, Open CV, Distributed Data Parallel
- **Tools:** Jupyter Lab, GitHub, Docker, VS Code, LaTeX

WORK EXPERIENCE

Unity 3D Developer | inGnious AI Pvt. Ltd. — **January 2023 - July 2023**
- Collaborated with cross-functional AI teams to integrate trained neural networks into production tools, ensuring seamless deployment.
- Developed automation pipelines to pre-process complex data assets, reducing manual effort by 80%.
- Optimized runtime performance of simulation tools to handle real-time constraints.

INTERNSHIP EXPERIENCE

UG Fellowship (Research) | Teesside University, Middlesbrough, UK — **June 2018 - July 2018**
- Engineered a simulation framework implementing A* algorithms for optimized pathfinding.
- Demonstrated strong initiative in a research setting, delivering a complete prototype within a strict 6-week timeline.

Java Internship | WinPoint Learning Center — **June 2020 - August 2020**
- Developed a full-stack Java application integrated with a custom MS SQL database, optimizing queries for data retrieval.
- Authored detailed module-wise documentation, adhering to software engineering best practices for maintainability.

PROJECTS

Self-supervised Denoising for Biofilm Micro-CT | Oregon State University — **September 2024 - December 2025**
- **Aim:** Enhancing medical imaging data using Generative/Self-Supervised Learning.
- Implemented a Noise2Noise self-supervised deep learning framework (U-Net) to denoise high-resolution micro-CT scans without ground truth data.
- Developed a user-facing analytical tool using Streamlit to visualize model outputs and statistical metrics (NIQE/PIQE).
- Applied advanced optimization techniques including Distributed Data Parallel (DDP) to train on large-scale volumetric datasets.

Multi-modal U-Net for Brain Tumor Segmentation | Oregon State University — **January 2024 - March 2024**
- **Aim:** Automated clinical care delivery tool for MRI analysis.
- Developed a deep learning pipeline using a Multi-modal U-Net architecture to segment brain tumors from MRI scans (RSNA-ASNR-MICCAI data).
- Fine-tuned the model for precise region-based segmentation, directly applicable to clinical diagnostic workflows.
- Evaluated performance using standard healthcare imaging metrics.

Multi-UAV Coordination (Optimization) | Oregon State University — **September 2024 - December 2024**
- **Aim:** Algorithm design for decentralized optimization.
- Designed reinforcement learning algorithms to solve constrained optimization problems in multi-agent environments.
- Analyzed global vs. difference rewards to improve statistical convergence of agent behaviors.

RESEARCH

Graduate Researcher | AADI Lab, Oregon State University **January 2024 - December 2025**

- Developing data-driven solutions for multi-agent coordination, utilizing reinforcement learning and statistical modeling.
- Designing and evaluating algorithms in Python to solve complex optimization problems in dynamic environments.
- Communicating research findings to technical audiences through collaborative lab meetings.