Prameth Gaddale

State College, Pennsylvania
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Education

The Pennsylvania State University **Jan 2023 -**
Master of Science in Biomedical Engineering *University Park, PA*

National Institute of Technology Andhra Pradesh **Sep 2017 - Jun 2021**
Bachelor of Technology in Chemical Engineering - First Class *Tadepalligudem, India*

Publications

- **Prameth Gaddale**, Manoj.B.Kale, Shirish H. Sonawane (2022) *Recent Progress in Intensifying Synthesis of Acrylic Microspheres for Catalysis*, Advanced Materials Interfaces, Wiley **(Under Review)**
- Sumit Agrawal, **Prameth Gaddale**, Sri Phani Krishna Karri, Sri-Rajasekhar Kothapalli (2021) *Learning Optical Scattering Through Symmetrical Orthogonality Enforced Independent Components for Unmixing Deep Tissue Photoacoustic Signals*, IEEE Sensors Letters, DOI

Experience

The Pennsylvania State University **Jan 2023 – Present**
Graduate Student Researcher *University Park, PA*

- Working at the intersection of various Biomedical Imaging modalities and Machine Learning.
- BioPhotonics and Ultrasound Imaging Laboratory

National Institute of Technology, Warangal **Jun 2021 – Dec 2022**
Research Assistant *Warangal, India*

- Developed process intensification synthesis methods for precise polymeric micro- and nanoparticles.
- Used ultrasound reactors and micro-reactors for enzyme immobilization and drug delivery applications.

The Pennsylvania State University **Mar 2020 – Apr 2021**
Research Intern *Remote*

- Developed machine learning models to improve the specificity of photoacoustic imaging for prostate cancer detection.

Skylark Labs **May 2020 – Oct 2020**
Machine Learning Research Intern *Remote*

- Implemented deep learning based computer vision models to solve long-range object detection.
- Developed unsupervised distribution alignment based deep generative networks for image domain conversion.

Defence Research Development Laboratory **May 2019 – Jul 2019**
Summer Intern *Hyderabad, India*

- Developed various computational models to predict the performance of dual combustion ramjet using MATLAB for sustained ignition.

Selected Projects

Unsupervised machine learning for unmixing of deep tissue photoacoustic imaging signals. | *Machine Learning*

Ultrasonic Synthesis of Acrylic Microspheres-MOF based composite. | *Process Intensification, Nanotechnology*

Unsupervised deep learning segmentation model for particle size prediction. | *Machine Learning, Computer Vision*

Machine learning model for predicting performance of Enzyme-MOF bio-catalysts. | *Machine Learning, Biocatalysis*

Technical Skills

Languages: Python, C++, MATLAB, Java
Softwares: Aspen Plus, Aspen HYSYS, LAMMPS, COMSOL
Frameworks: PyTorch, TensorFlow, Scikit-Learn, STL

Services

Reviewer: IEEE Applied Sensing Conference 2023
Head, Technical Committe: AI and Robotics Club, National Institute of Technology Andhra Pradesh
Executive Member: Chemical Engineering Association, National Institute of Technology Andhra Pradesh
Campus Ambassador: AZeotropy 2019, IIT Bombay