

Saumya Gupta

Website: <https://saumya-gupta-26.github.io/>
saumgupta@cs.stonybrook.edu | [linkedin](#) | [google-scholar](#) | [github](#)

EDUCATION

Stony Brook University <i>PhD in Computer Science, GPA: 4.00/4.00</i>	Stony Brook, NY, USA <i>Aug. 2021 – Present</i>
National Institute of Technology Karnataka (NITK) <i>B.Tech in Computer Science and Engineering, GPA: 9.49/10.00</i>	Surathkal, India <i>Aug. 2014 – May 2018</i>

EXPERIENCE

Graduate Research Assistant <i>Stony Brook University</i> <ul style="list-style-type: none">Topology-aware loss for multi-class medical image segmentationStructural uncertainty using topology and CRF	Aug 2021 – Present <i>Stony Brook, NY</i>
Graduate Teaching Assistant <i>Stony Brook University</i> <ul style="list-style-type: none">TA for the undergraduate course Theory of Computation (CSE303)Conducted office hours, curated questions, and graded homework	Aug 2021 – May 2022 <i>Stony Brook, NY</i>
Senior Software Engineer <i>Samsung R&D Institute</i> <ul style="list-style-type: none">Replaced the existing ISP pipeline in Samsung Camera with a single light-weight CNN (Commercialization in Samsung Galaxy S21)Super-resolution of 3D Ultrasound ovarian volumesImplemented security measures to the DICOM platform to ensure the platform was HIPAA-compliant	July 2018 – Mar 2021 <i>Bangalore, India</i>
Research Assistant <i>NITK Surathkal</i> <ul style="list-style-type: none">Bachelor's thesis on Software Defined Networks (SDN)Minimized the time to detect faults in the network (silent blackhole detection)	July 2017 – May 2018 <i>Surathkal, India</i>
Intern <i>Samsung R&D Institute</i> <ul style="list-style-type: none">Used Vulkan to render a tile-based vertical scrolling approach to minimize the load on the GPU	May 2017 – July 2017 <i>Bangalore, India</i>

PUBLICATIONS

Learning Topological Interactions for Multi-Class Medical Image Segmentation <i>Saumya Gupta, Xiaoling Hu, et. al.</i>	<i>ECCV 2022 (Oral)</i>
Ovarian Assessment Using Deep Learning Based 3D Ultrasound Super Resolution <i>Saumya Gupta, Venkata Suryanarayana K., Srinivas R. Kudavelly</i>	<i>SPIE 2021 (Oral)</i>
Currency Recognition System Using Image Processing <i>Vedasamhitha Abburu, Saumya Gupta, S. R. Rimitha, Manjunath Mulimani, Shashidhar G. Koolagudi</i>	<i>IC3 2017</i>

SELECTED AWARDS

ECCV Travel Award	2022
Samsung Spot Award	2020, 2019
Samsung Quality Champions Annual Award	2018
Samsung Professional Level Software Certification	2018

TECHNICAL SKILLS

Languages: Python, C/C++, Java, PostgreSQL

Tools, Frameworks: PyTorch, Keras, TensorFlow 1 & 2, OpenCV, MATLAB, Visual Studio, LaTeX, Android Studio, Sony Vegas, Adobe After Effects, Photoshop, Procreate

POSITIONS OF RESPONSIBILITY

Treasurer <i>Women in PhD (WPhD) Club</i>	2022 - Present <i>Stony Brook</i>
Volunteer Instructor <i>Learning & Development</i>	2018-2020 <i>Samsung R&D Institute</i>
Joint Convenor <i>Media, Arts, and Creative Design (MACD) Club</i>	2016-2018 <i>NITK, Surathkal</i>
Create Head <i>Indian Society for Technical Education (ISTE) Club</i>	2017-2018 <i>NITK, Surathkal</i>