Ayush Baid

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Interested in internship opportunities in machine learning, and computer vision during Fall 2020

EDUCATION

Georgia Institute of Technology — Atlanta, USA

MS in Computer Science (Machine Learning) — Aug 2019 - May 2021*

- GPA: 4.00/4.00 | Relevant courses: Machine Learning, Deep Learning | **TA for Computer Vision** (Fall '19, Spring '20)

Indian Institute of Technology (IIT) Bombay — Mumbai, India

B.Tech. and M.Tech. in Electrical Engineering, Minor in Computer Science — Jul 2012 - Jun 2017

- GPA: 9.17/10.00 | Relevant courses: Computer Vision, Medical Image Processing, Markov Chains

PUBLICATIONS

- Baid et al. "Joint desmoking, specularity removal, and denoising of laparoscopy images via graphical models and Bayesian inference." *2017 IEEE 14th International Symposium on Biomedical Imaging (ISBI).*

KEY PROJECTS

Evaluation of Deep Front Ends for Computer Vision — Dec 2019 - Apr 2020*

- Creating a comprehensive evaluation framework for keypoint detection and description using EvalAI leaderboard

4D Spatio-Temporal Reconstruction of Crops — Aug 2019 - Apr 2020*

- Modeled the structure from motion problem using factor graphs in space and extended it across temporal domain
- Developed a robust algorithm for essential matrix by filtering out repeated texture and improved sampling in ransac

Audio Compression using Deep Learning — Oct 2019 - Nov 2019

- Built CNN based autoencoders to learn a compressed latent space; reused the latent space for genre prediction

Deep Learning based Weather Transfer — Oct 2019 - Nov 2019

- Used cycle GANs for image-to-image translation to convert cloudy images to sunny using new content similarity loss

Bayesian Machine Learning for Laparoscopy Image Processing — Jun 2016 - Jun 2017

- Modelled system variables with probabilistic graphical models and designed novel priors for texture and color learning
- Oral presentation at IEEE ISBI 2017; Received **Undergraduate Research Award** from IIT Bombay

RPM prediction — Mar 2017 - Apr 2017

- Designed prediction model for stable RPM outputs using MAP estimates; preprocessed sensor data with digital filters

Fish Classification using Point Set Registration — Mar 2016 - Apr 2016

- Developed an algorithm to place points on fish boundary and use point set registration with class templates

FOSSEE Scilab Toolbox — Dec 2015 - Jan 2017

- Developed and tested signal processing functions for the open source toolbox, emulating the MATLAB's API

EXPERIENCE

Goldman Sachs — Bengaluru, India

Analyst, Risk Division — Jun 2017 - Jul 2019

- Built task packaging and runtime prediction model for risk calculations; contributed to **reduction of ~10% in compute**
- Developed a new data engineering system to capture the runtime metadata of millions of pricing sessions
- Designed a new distributed computing system based on **microservice architecture** using Kafka and MongoDB to calculate risk for FRTB regulation, generating global data stores and **reduced debug time by ~20%** for teams

Sony Corporation — Tokyo, Japan

Intern, Test Technology — May 2015 - Jul 2015

- Developed a cloud-based testing platform for Android applications with on-demand device allocation service
- Injected stubs in the Android source code to work-around network restrictions in Android's native emulators

SKILLS

Languages: C++, Python, Scala| **Software and Tools**: GTSAM, Kafka, MongoDB, OpenCV, PyTorch, Redis, SQL