Anirudh Prabakaran

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EDUCATION

MS in Computer Science | Georgia Institute of Technology **Aug 2021 — May 2023 (Expected)**
- **Specialization:** Computational Perception and Robotics
- **Courses:** Intro to Grad Algorithms, Computer Vision, Special Problems (Video Analytics)

B.Tech in Computer Science | National Institute of Technology - Tiruchirappalli | GPA: 8.18/10.00 **Jul 2014 — May 2018**
- **Courses:** Data Structures and Algorithms, Operating Systems, Database Management Systems, Computer Networks.

WORK EXPERIENCE

Georgia Institute of Technology **Aug 2021 — Dec 2021**
Graduate Teaching Assistant | College of Computing Atlanta, GA

- Instructor for CS4400 Intro to Database Systems (Fall 2021).
- Responsibilities include grading quizzes, holding weekly office hours, reviewing projects and monitoring piazza.

Iron Mountain **Sep 2020 — Jun 2021**
Machine Learning Engineer | Insight Bangalore, India

- Involved in research and implementation of solutions in Document Understanding (splitting, classification, entity validation/extraction). Actively participated in weekly meetings to present latest papers and demonstrate prototypes.
- Designed and engineered a human-in-loop, event-driven pipeline on GCP to process documents using in-house models. By not relying on Cloud AI APIs, we saved significant costs to the company and also helped replicate the architecture to other verticals.

Samsung Research Institute Bangalore **Jun 2018 — Aug 2020**
Senior Software Engineer | IoT Products and Platforms Bangalore, India

- Contributed to research, commercialization and debugging of Home Monitoring solutions integrated with SmartThings.
- Spearheaded a research proposal to identify anomalous segments from surveillance videos. Used C3D to extract spatiotemporal features from video segments and fed them into a CNN to assign regression scores. Presented this publication in a conference. [link]
- Developed an SDK for IoT devices enabling p2p communication using WebRTC with a team of 8 members. By avoiding servers during streaming, this SDK helped to significantly lower latency and reduce server costs.
- Received a spot award for developing an emergency home audio monitoring engine, targeting common household sounds. This solution was successfully ported in our home assistant and demonstrated during a workshop at HQ, Korea. [link]
- Finalist in an internal hackathon among 100+ teams for building and prototyping a chatbot to boost employee productivity. It had the ability to keep track of tasks, learn simple daily actions and execute them again in a user-friendly chat interface. [link]
- Awarded the Samsung professional certification for strong algorithmic competency, given to engineers globally.

RECENT PROJECTS

Exploratory Video Analytics [link] **2021**
- EVA is a visual data management system. It supports SQL-like syntax and many commonly used computer vision models.
- Built with Python, asyncio, cmd (to mimic an SQL-like interface), Docker and PyTorch.
- Collaborating with the Georgia Tech DB research group who have been maintaining this project since 2019.

Cricboard [link] **2021**
- Built a statistics website targeted towards fantasy players, to visualize interesting cricket insights in an interactive and dynamic UI.
- This webapp was made with Python, Streamlit and hosted with AWS. Data was scraped from cricinfo and cricsheet.
- Gathered 30k+ page hits on the opening day of IPL and received a daily average of 2k hits during the tournament.

Video Queries on Driving Video Datasets [link] **2021**
- Trained a network built over FasterRCNN to issue simple count queries on the Berkeley DeepDrive dataset.
- Was able to achieve real-time inference for common video queries like counting cars, pedestrians etc.

TECHNICAL SKILLS

Programming Languages Python, C++, SQL
Frameworks and Tools PyTorch, Docker, Git

VOLUNTEER AND EXTRA-CURRICULAR

- **Teaching Volunteer, Make a Difference:** Taught classes weekly for school kids belonging to various shelters in Bangalore. [link]
- **Head, Publicity Team, College Cultural Fest:** Headed a team of 50 members, to increase brand value and participation for the fest.
- **Department Coordinator, College Sports Fest:** Managed participation and activities of the CS department during the fest.
- **Web Developer, College Coding Club:** Involved in development of various internal projects, events and mentor-ship programs.
- **Sports Contingent:** Represented college in the Chess team, and the department in Cricket and Soccer.