

# Anirudh Prabakaran

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## EDUCATION

**MS in Computer Science** | Georgia Institute of Technology

Aug 2021 — Present

- **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

**Graduate Teaching Assistant**

Aug 2021 — Dec 2021

College of Computing | Georgia Institute of Technology

Atlanta, GA

- Instructor for CS4400 Intro to Database Systems, Fall 2021. Enrolled by 500+ students.
- Responsibilities include grading assignments, holding weekly office hours, reviewing projects and monitoring piazza.

**Machine Learning Engineer**

Sep 2020 — Jun 2021

Insight | Iron Mountain

Bangalore, India

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

**Senior Software Engineer**

Jun 2018 — Aug 2020

IoT Products and Platforms | Samsung Research Institute Bangalore

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++, JavaScript

**Tools and Frameworks** Docker, SQL, PyTorch, Git

**Cloud and OS** GCP, AWS, Linux, Windows

## VOLUNTEER AND EXTRA-CURRICULAR

- **Teaching Volunteer, Make a Difference:** Took weekly classes 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 Football.