

MUKUND MANIKARNIKE

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CAREER SUMMARY

- Since 2014 until now, I've been interested in specifics of video delivery. I currently work on the back-end of a video management platform that enables live streaming. Well versed in the understanding of the requirements for the back-end of such a system.
- Worked on MAC layer for WLAN from 2011 to 2014, interfacing with TCP from the host and Physical layer below it. Well versed in these protocols as well.

EXPERIENCE

Brightcove Inc. – Scottsdale, Arizona, USA

September 2016 to Present

Software Engineer

Live streaming platform

- Back-end services for a live streaming platform using AWS services like Lambda, EC2, Dynamo etc.
- Provisioning live streams, highlights extraction and implementation of services like analytics reporting, housekeeping.

Ittiam Systems Pvt. Ltd. – Bangalore, Karnataka, India

Jul 2011 to Dec 2014

Senior Engineer (Apr 2013 to Dec 2014); Engineer (Jul 2011 to Mar 2013)

Live Streaming Platform

- Understanding specifics of video ingestion and delivery using AWS services
- Developing Proofs of Concepts related to some parts of the platform like a web application, virtualization of environment deployment using Chef and Vagrant were part of my work.

WLAN MAC Layer protocol development

- Implemented features like Sniffer, Frame Injector, External Supplicant, authenticator, WPS.
- Single point of contact for several customers to complete Wi-Fi Certification and Connectivity Chip tape-outs.
 - Solved issues related to low throughputs, inter-operability, memory corruptions and link losses.

Arizona State University – Tempe, Arizona, USA

Feb 2015 to Feb 2016

Graduate Student Assistant, School of Sustainability and Engineering

Desktop application called [PrioriTox](#) for toxicity analysis in Java (Programming Language – Java)

- Built all parts of the application from scratch and an MS Windows installer
 - Generating uniform, normal distributions using [Apache Commons](#) library and interacting with MS Excel macros programmatically to generate emission toxicity levels to air, water and soil.
 - Visualizing results graphically using [JFreeChart](#) histograms and rank correlations.

EDUCATION

Arizona State University – Tempe, Arizona, USA

January 2015 - August 2016

Master of Computer Science

GPA: 3.58/4.0

Relevant Courses: Data Mining, Statistical Machine learning, Social Media Mining, Multimedia Information Systems, Distributed Software Development, Advances in Databases, Database Management System Implementation

PES Institute of Technology – Bangalore, India

September 2007 - June 2011

Bachelor of Science, Information Science and Engineering

GPA: 8.02/10.0

Relevant Courses: Analysis and Design of Algorithms, Data Structures, Database Management Systems, Software Engineering, Operating Systems, Computer Networks, Mobile Computing

ACADEMIC PROJECTS [more>>](#)

SOAP Explore (C#) – Search application to find SOAP services using Google's APIs

Restaurant Recommender System (Python) – Recommender built on Yelp Data using Sci Kit Learn libraries.

Main Memory Database (C, Java) – Performance comparison of indexing techniques on Main Memory Databases.

Twitter Hashtag Prediction (Python) - Prediction of twitter hashtags through supervised learning.

Cryptographic algorithms (C) – Designed and implemented algorithms for encryption and breaking password hashes.

ACHIEVEMENTS

Secured 3rd place in the 2nd Annual Code Challenge conducted by [SoDA](#) at ASU

February 2016

Spot Award for development of an inventory tracking system

August 2013

TECHNICAL SKILLS

Programming Languages: Java, C/C++, Javascript, C#, Python, HTML, CSS,

Protocols: Apple HLS, IEEE 802.11, TCP, REST, SOAP,

Tools: Eclipse, IntelliJ, Webstorm, Visual Studio, Docker, AWS Lambda, AWS EC2, AWS Dynamo, Datadog, Wowza