

ANAND KOSHY

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EDUCATION

Oregon State University - Corvallis, OR - USA

Sep 2018 - Mar 2021

Master of Science in Computer Science

Sathyabama University - Chennai, India

Sep 2011 - Mar 2015

Bachelor of Engineering in Computer Science

TECHNICAL SKILLS

Languages: Java, Python, C/C++

Libraries: Pytorch, Tensorflow, Scikit-Learn, Keras

Databases: PostgreSQL, SQLite, NoSQL, MySQL

Backend Frameworks: Spring Boot, Flask, Django

Miscellaneous: Microservices, Git, Docker, Kubernetes, Spark, RabbitMQ, Hibernate

WORK EXPERIENCE

Wild Me - Portland, OR - USA

Jun 2019 - Aug 2019

Computer Vision Intern

- Implemented a Deep Learning based approach to help conservationists track population and migratory patterns of whales by uniquely identifying whales based on crowdsourced images of their flukes/tails.
- Performed instance segmentation to segment out the fluke of the whale from the image using a UNET network achieving an IOU score of 92%.
- Analyzed the performance of 4 computer vision algorithms that were part of the Whale Identification challenge on Kaggle against WildMe's dataset of whale flukes to uniquely identify whales based on flukes.

Technologies: PyTorch, Python, Docker, Git

Oregon State University - Corvallis, OR - USA

Dec 2018 - Mar 2021

Graduate Teaching Assistant

- Lead under-graduate students in the courses Android Development (Java), Flutter Mobile Development (Dart), Cloud Application Development (Node.js / Flask, Docker, MongoDB, RabbitMQ), Introduction to Databases (MySQL).

NexM Software Pvt. Ltd. (Currently MyChessApps) - Bengaluru, India

May 2015 - Aug 2017

Software Engineer

- Designed and implemented the backend server for the real-time online chess multiplayer feature for the Chess Moves app, which resulted in a 45% increase in downloads ensuring low latency.
- Designed and implemented a highly reliable backend server for 'Gift a Friend', a high-security feature in the Follow Chess App that allows you to gift a subscription to a friend which led to increased revenue by 20%, using Java (GAE Endpoints).
- Designed and implemented an instant chat & notification feature using the Firebase Realtime Database for online chess multiplayer that allowed for better user interaction.
- Mentored the new employees and brought them up to speed on the technology stack.

Technologies: Java, Android, Microservices, GCP, Node.js, Javascript, Git, Agile, Memcache, SQLite, JUnit Tests

OPEN SOURCE

• **Habitat - API, Facebook AI Research**

Jul 2019 - Dec 2019

- Habitat-API is a modular high-level library to train embodied AI agents across a variety of tasks, environments, and simulators.
- Implemented a new task (Visual Language Navigation task) for the Room2Room dataset which allowed researchers to train embodied agents for this novel task on Habitat.
- Implemented the DTW metric for Habitat which is used to measure the performance of embodied agents. (PyTorch, Python)

PROJECTS

• **Pattern Studio (M.S. Capstone)**

Nov 2020 - Feb 2021

- Developed an Android application to apply a pattern on a clothing segment in a given user image.
- A deep learning-based model (UNET) was used to segment out the clothing followed by blending the pattern onto the segment implemented on the backend server which was deployed using docker. (Java, Python, Pytorch, OpenCV, Flask, Docker)

• **Image Retrieval using Image Matching and Captioning**

Feb 2019 - Mar 2019

- Performed query-based search on a dataset of unlabeled data where Image similarity indexes were generated for all the images using CNNs with keypoint matching.
- Captions generated by an LSTM for random images were matched with the query and all the similar images of that matched random image were returned. (Python, PyTorch)

• **Text Ninja**

Jan 2019 - Mar 2019

- Android application to efficiently read articles/books by highlighting paragraphs of interest and filtering out nonsimilar paragraphs.
- Highlighted paragraphs in a document are passed to the backend flask server to find similar paragraphs across the entire document using cosine similarity & TF-IDF. (Android, Java, AWS, Flask, NLTK)

• **Music Tracker**

Jan 2021 - Feb 2021

- A web application that lets you keep track of your music by letting you create your playlist along with adding and removing songs of your choice to it. (Java, Spring Boot, Hibernate, H2 Db, Swagger, JQuery, Thymeleaf, AWS Beanstalk)