ANAND KOSHY
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EDUCATION

Oregon State University - Corvallis, OR - USA *Sep 2018 - **Mar 2021***
Master of Science in Computer Science (CGPA: 3.67)

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.
- 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 CONTRIBUTIONS

- **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)*