Sanket Sapkal

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Education

- **University of Southern California** — Los Angeles, CA
  Master of Science in Computer Science — *August 2021 - May 2023*
- **Pune Institute of Computer Technology** — Pune, India
  Bachelor of Engineering in Computer Engineering; GPA: 3.62 (72.5%) — *July 2013 - July 2017*

Experience

- **Cursor Insight Ltd.** — London, UK
  Software Developer (Remote) — *July 2019 - July 2021*
  - Product: Signowise, a biometric electronic signature and document handling system.
  - Developed a **distributed and concurrent event dispatching** feature for the synchronization subsystem.
  - Designed and implemented **Incremental Updates** feature in the synchronization subsystem and workflow engine to optimize the write operations, thereby **improving the write performance by 50%.**
  - Implemented a **Conflict Resolution framework** for the synchronization subsystem to resolve conflicts.
  - Designed and implemented a Document Transfer framework, which facilitates handover of electronic document from one client to another across geographical location.
  - *Technologies: Erlang, Cowboy, React, SQL, Avro*

- **Veritas Technologies LLC** — Pune, India
  Associate Software Engineer — *July 2017 - July 2019*
  - Product: Veritas Cognitive Object Storage, a distributed object storage based on DynamoDB paper.
  - Developed **Object versioning** and **WORM** features, which improved the fault tolerance of the product.
  - **Enhanced product ingest performance by 400% and read performance by 200%** by developing a queuing framework which ensures the spatial locality of related data.
  - **Enhanced product scale out performance** by solving the data rebalancing problem, effectively **reducing the data rebalance to 10% of the earlier number**, giving VCOS an edge over the competitors.
  - **Designed and implemented data-chunking and distributed garbage collection frameworks** for efficient handling of large objects.
  - Added **TLSv1.3, OAuth 2.0, 2FA, KMIP support in the product for enhanced security.**
  - Added IPv6 support to the product for Public Sector Compliance.
  - **Successfully demoed Kafka, IoT, Video Streaming applications with VCOS** in Veritas tech fairs as well as in customer engagements.
  - *Technologies: Elixir, Erlang, Riak Core, RocksDB, LMDB, Phoenix, Angular.js*

Projects

- **SeeFruit**
  - Android App which uses Deep Learning(CNNs) to identify a fruit and provide nutritional info when an android phone camera is pointed at it.
  - Stripped and retrained inception v3 model to generate a custom model for fruits, with accuracy of 85%.
  - *Technologies: Android, Tensorflow*

- **Smart Chatbot**
  - Python webapp which uses Deep Learning(LSTMs) to answer to human queries. It can be used to reduce human effort in replying to messages and emails while interacting with customers.
  - Neural Network architecture: standard encoder/decoder with 2 LSTM layers (hidden size 256).
  - *Technologies: Android, NLTK, Tensorflow*

- **Food Map**
  - Web app which enables users to list/save favourite restaurants on a personal real time Google Map with custom markers for different types of restaurants.
  - *Technologies : MEAN stack, Google Maps web API*

Technical Skills

- **Languages**: Elixir, Erlang, Java, Javascript, C++, Python
- **Frameworks**: Phoenix, Riak Core, J2EE, Android, MEAN stack, Tensorflow, CUDA
- **Databases**: SQL, RocksDB, LMDB, MongoDB, CockroachDB