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 - Present*
  - 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: AVRO, Cowboy, Erlang, MSSQL, React.
- **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: Angular.js, Elixir, Erlang, Phoenix, Riak Core, RocksDB, LMDB.

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