

Arjun Menon

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WORK EXPERIENCE

ACTIVEVIAM | SOFTWARE ENGINEER

ES6 JS (statically typed with Flow), React March 2017 – April 2018

ActiveViam sells a database used by large financial institutions like HSBC and Freddie Mac. Its key selling point is the fast computation of complex queries with incremental updates. This database uses a query language called MDX.

- Worked on an SDK built around this database, which provided an API and React components for creating and manipulating queries, and visualizing query results. This SDK was used to build customer-specific web apps.
- Implemented functions that generated MDX code, for complex use cases.
- Implemented recognition of already written MDX code, by analyzing the abstract syntax tree, and transforming it into an internal representation.
- Developed various React components (built on top of the code generation and recognition systems) that enabled end-users to create and manipulate complex MDX queries, using lucid user interfaces.
- Refactored core parts of the codebase to add Flow static types.

ADP (LIFION) | SOFTWARE ENGINEER

JS with React, Docker, Node.js June 2016 – Sept 2016

- Developed features for a web app designer that enabled non-technical users to specify HR and payroll logic through a drag-and-drop interface.
- Implemented certain steps of a server-side data processing pipeline.

AMPLIFY | SOFTWARE ENGINEER

Java on Android, Java 8 on the server-side Oct 2014 – June 2016

- Worked on the Android app and server-side of an educational platform used by several schools in the U.S. and that had 40k+ daily active users.
- Implemented the backend of a data export feature that enabled users to download all their data as a ZIP file. (New REST endpoints on the server.)
- Improved the Android app's responsiveness and reduced activity load times from ~800 ms to ~200 ms, by performing SQLite database queries in separate threads, and populating the UI as each query completed.
- Implemented a user behavior tracking system inside the Android app.
- Implemented Content providers to abstract data stored in the app.
- Wrote Dockerfiles for CI & testing, as part of an effort to move from custom-configured physical machines to Docker containers on AWS.
- In general, developed new features, prototyped features, and fixed bugs.
- Worked as part of an Agile team. Released updates to production weekly.
- Practiced test-driven development. Wrote unit tests & functional tests.

KIKIN | SOFTWARE ENGINEER

Java on Android, C++ Feb 2013 – Sept 2013

- Modified a Chromium-based Android browser, to integrate kikin, which displayed overlaid search results when a user long-pressed on some text.
- Ported the modifications kikin had made to WebCore, to Blink.
- Modified the AOSP Mms app to integrate kikin search into it.

OPEN SOURCE PROJECTS

See on: <https://github.com/arjun-memon>

TEMPLATE ENGINE (PYTHON)

A templating language with syntax similar to Jinja2 or Liquid. Designed to be intuitive for Python programmers with key template constructs mapping directly to Python.

 pypage

LISP INTERPRETER (C++17)

A LISP-like language built to demonstrate a new kind of syntax: concurrent support for infix expressions and LISP's S-expressions. Written in clean, modern C++. Catch2-based unit tests. Code quality further ensured with Valgrind, cppcheck, and 'Wall -Werror'.

 Neolisp

TRANSPILER (PYTHON)

Automatically translates a domain-specific Datalog-based language called Cassandra, to human-readable object-oriented Python.

 Cassandra-to-Python

TAX ANALYZER (JS, OCAML)

A simple web-based tool that provides a detailed breakdown of the taxes in NYC.

 tax-analyzer

2D GAME ENGINE (C++14)

A game engine in the making. Uses SDL for rendering. Implements a custom collision detection system, physics engine, etc.

 Adventure

EDUCATION

B.S. IN COMPUTER SCIENCE

STATE UNIVERSITY OF NEW YORK
AT STONY BROOK

2012

SKILLS

Languages, frameworks, tools, etc:

C • C++ • Java • Android • JavaScript ES6
Python • SQL • ReasonML • React • Flow
Git • Arch Linux • Docker • RxJS • HTML