Neil Parikh

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Skills

- Programming Languages: Bash, C, Haskell, Java, JavaScript, Python, Ruby, Rust, SQL
- Frameworks: Ruby on Rails, Django, React
- Development tools: git, gdb, make, valgrind

Experience

theScore | Full Stack Developer Intern   Toronto, May - Aug 2018
- Implemented a dashboard for allowing supervisors to approve or reject push alerts, improving quality of alerts sent
- Built a feature that allows editorial staff to schedule featured articles and posts, reducing time spent on curation

Encircle | Software Developer Intern   Kitchener, Sep - Dec 2017
- Worked on the Encircle web (Python/Django), iOS, and Android apps
- Implemented a password strength indicator during signup for the mobile apps, achieving parity with the web platform
- Refactored the Python test infrastructure to create a unique database per test, achieving production-like conditions

Careguide | Software Developer Intern   Toronto, Jan - Apr 2017
- Created a plug-in to show user data in the customer support tool, which reduced response time by 5-10 s per ticket
- Created a GraphQL API and migrated queries and mutations from the existing REST API
- Improved developer tooling, including Docker performance, and reducing false positives in the CI process

Top Hat | Web Developer Intern   Toronto, May - Dec 2016
- Implemented APIs for syncing grades from Top Hat to other systems, using Python/Django and Java/Spring
- Used React and Backbone to implement UI components for the syncing interface
- Optimized a frequently run expensive operation by 5x by implementing a custom SQL query

Pebble | Firmware Engineering Intern   Palo Alto, Sep - Dec 2015
- Worked on the core Pebble OS, adding features and fixing bugs, as well as extending the SDK
- Added an API flow for Pebble apps to handle errors during voice interactions
- Developed a Pebble app to visualize health related data such as steps and sleep
- Designed and implemented custom graphics algorithms as needed for the app UI

Government of Canada, Treasury Board Secretariat (TBS) | Front End Developer Intern   Ottawa, Jan - Apr 2015
- Added a compression step to the build process, using the LZW algorithm, which resulted in a 40% data size reduction

Projects

Lambda Calculus | git.io/lambda-calculus
- Implemented type-checkers and evaluators for Gödel's System T using the bidirectional type checking algorithm

Formal Verifier
- A Hoare logic based formal verifier written in Haskell, for a simple imperative language
- Used Hoare logic to derive pre-conditions on the program based on the stated post-conditions

GCcollect | git.io/gccollect
- A mark and sweep garbage collection library for C

Time Traveling Debugger | git.io/debugger
- A time traveling debugger for a custom imperative language implemented in Haskell
- Allows the user to step forwards and backwards through a program using a stack of environments

Education

University of Waterloo | Candidate for BASc. in Mechatronics Engineering   Apr 2021