NIKHIL HARESH KESWANEY

nhk8621@rit.edu 201-682-2100 Seattle, Washington nikhilkeswaney.com nikhilkeswaney nikhil-keswaney

SUMMARY

Actively seeking **full-time** opportunities in **software development** starting **January 2020**.

EDUCATION

- **Rochester Institute of Technology** — **Rochester, NY**
  Master of Science | Computer Science | GPA: 3.78/4.0 — August 2017 - December 2019
- **Mumbai University** — **Mumbai, India**
  Bachelor of Engineering | Computer Engineering — August 2013 - May 2017

SKILLS

- **Programming Languages:** Java, Python
- **Database Development:** MySQL, Oracle, Microsoft SQL Server
- **Web Technologies:** HTML, CSS
- **Tools/IDE:** Git, Parallel Java 2, OpenMP, Arduino, Unity 3D, Keil, Pandas, NumPy, RATTLE, Sci-Kit learn, Open CV

EXPERIENCE

- **Vitech Systems Group Inc.** | *Software Developer Intern* | New York, NY — June 2018 - August 2018
  TECHNOLOGIES USED: Java, Python
  - Designed and implemented a new firm-wide module ART(Automated Regression Tool) in python. It empowers the firm with a UI and programmatic access to perform regression tasks, while providing monitoring and report generation features. Replaced the legacy system by reducing the CPU overhead and sped up the start-up time by $\sim 50\%$.
  - Built an extensible parsing engine to support new formats for ART input/configuration data and also provide backward compatibility.
- **Digital Systems** | *Intern* | Mumbai, India — October 2015 - January 2016
  TECHNOLOGIES USED: Embedded C
  - Designed and developed a Thermal Printer using ARM-STM32F100 microcontroller in Keil IDE which operated on two modes, fast printing and power saver.
  - Optimized the power consumption by $\sim 40\%$ in power saver mode by reducing the number of thermal points used.
  - The fast mode used a DMA bus instead of interrupt based I/O making it faster by a factor of $\sim 3x$.

PROJECTS

- **Email Classification**
  TECHNOLOGIES USED: Java, Parallel Java 2
  - Created an email classification system in which the emails automatically get classified as spam or ham (not-spam) using the K- nearest neighbor algorithm.
  - The co-ordinate of each email was determined by the TF-IDF(Term Frequency and Inverse Document Frequency) numerical statistic and used the Euclidean distance to find out the similarity between emails.
  - Using all of it together gave an accuracy of $\sim 80\%$.
  - Designed a parallel architecture for this software to achieve $\sim 94\%$ strong scaling and $\sim 98\%$ weak scaling.
- **Warehouse Management System**
  TECHNOLOGIES USED: Java, MySQL, C++, Arduino UNO, PHP, HTML, CSS
  - Introduced RFID in inventory management by replacing the traditional barcode scanning systems. Reduced the inventory turnaround checking time by a factor of $\sim 100x$.
  - Designed an e-commerce website where people can order according to the availability of the product.
  - Developed an administrative portal where an order is prepared and a bill is generated.
- **Dutch or English?**
  TECHNOLOGIES USED: Python, Pandas
  - Built a language recognizer to identify whether the sentence is written in Dutch or English.
  - Used the decision tree model and achieved an accuracy of $\sim 80\%$.
  - Applied the meta-algorithm AdaBoost to take advantage of multiple decision trees and predictions using weighted average of all the decision trees. This increased the accuracy of the model to $\sim 87\%$.
- **Virtual Reality Educational Application**
  TECHNOLOGIES USED: Unity 3D, Google VR SDK, C#
  - Developed interactive virtual reality scenarios which facilitate a better understanding of subjects for school students by giving them a real feel for the environment they are learning about.
  - Used techniques like gaze input and head movement to interact with the virtual environment.