

Vivek Kumar

Software Engineer - Amazon

Santa Clara, CA - Email me on Indeed: [indeed.com/r/Vivek-Kumar/22485a2c304181e1](https://www.indeed.com/r/Vivek-Kumar/22485a2c304181e1)

Willing to relocate: Anywhere

Authorized to work in the US for any employer

WORK EXPERIENCE

Software Engineer

Amazon - Sunnyvale, CA - August 2014 to Present

Worked on the data engine team collaborating with audio algorithms and speech scientists teams to provide high quality audio data used to build the Amazon Echo line of products

- o Designed C/ Python based platform for analyzing the quality of audio files
- o Implemented a noise robust voice activity detection algorithm in C++
- o Implemented AEC algorithm on TI 6713 DSK
- o Designed scripts in Python to measure triangulation quality using rigid transformation matrix
- o Created suite of scripts for analyzing data stored in Apache Spark clusters using Pyspark

Database Developer

Epsilon - Wakefield, MA - August 2013 to July 2014

- o Responsible for design and documentation of production databases
- o Programmed C++ based front end tool to allow for executing and monitoring complex database activities
- o Spearheading automation tasks for database updates

Software Engineer

Humedica Inc - Boston, MA - October 2011 to August 2013

- o Developed and maintained ETL code to transform unstructured medical data from hospitals into database objects to be ingested by cutting edge health analytics application
- o Created C++ based automation tool to load incoming data in the form of flat files into the staging environment
- o Created Python based tool to parse XML files into output CSV files to be loaded into an Oracle database using SQL*Loader
- o Designed data extraction tool in C++ in order to dump data from tables based on dynamic SQL into flat files via customizable parameters for user-desired output formatting
- o Single-handedly developed and maintained ETL code to de-identify medical data from hospitals into database objects to be outsourced for research purposes
- o Created various PL-SQL procedures to generate ad hoc reports based on dynamic SQL
- o Created PL-SQL procedures to be used in the ETL code for various data cleanup/transformation applications

Programmer Analyst

Educational Testing Service - Princeton, NJ - October 2010 to September 2011

- o Designed a C++ based data manipulation/collection tool to fetch candidate test registration files as and when made available at an SFTP site in order to QC them and move to 'Ok for processing vault'

- o Designed a Python based multi-threaded tool to automate batch-wise process execution -The tool was designed with a MySQL backend and was required in order to automate the process of loading filtered data into MySQL from an Oracle database.
- o Created a Perl based health check application to generate alerts for automated data load failure issues
 - Designed in order to check for scheduled task failures in order to alert team of engineers when critical scheduled tasks failed via mail.
- o Provided ad-hoc reports to users of the database when requested using PL-SQL blocks.
- o Interacted with clients at various international locations in order to provide troubleshooting guidance providing 24/7 availability during test administrations

- Speech Modification Software

- o C++ based speech modification software -Program, when trained with speaker voices, is able to change input speech into speech as would have been spoken by a speaker in the training dataset.

- Image Processing

- o Implemented image filtering and deblurring algorithms in C++ (OpenCV) and MATLAB. Digital filters were created to analyze and mitigate various kinds of blurring phenomenon (eg. Motion, Gaussian blur, etc)

EDUCATION

Master of Science in Electrical Engineering

State University of New York - Stony Brook, NY

May 2010

Bachelor of Technology in Electronics and Communication Engineering

ICFAI University - Hyderabad, Andhra Pradesh

June 2007

SKILLS

C++, C, Python, SQL, Perl

ADDITIONAL INFORMATION

Summary of Skills

- Strong programming skills in C, C++, Python, Perl, MATLAB
- Hands-on experience with implementing DSP algorithms in C++
- Good understanding of DSP fundamentals
- Strong database programming skills in platforms as Oracle/MySQL using SQL, PL-SQL
- Experience with Apache Spark Cluster using pyspark
- Sharp analytical and problem solving skills
- Excellent interpersonal and communication skills

Technical Skills

- Programming Languages - C, C++, Python, Perl
- Simulation softwares - MATLAB, Octave
- DSP Platforms - [...]

- Scripting languages - Korn/Bash Shell Scripting
- Database platforms - Oracle, MySQL
- Big Data Clusters - Apache Spark
- Database programming languages - SQL/PL-SQL
- Operating Systems - Linux(Red Hat, Ubuntu, Fedora), MAC OSx, Windows