Bhaumik Mistry

Software Engineer

OBJECTIVE

Dedicated, motivated and art-oriented software engineering graduate applying knowledge in the field of image processing, image segmentation and machine learning to cater to the specific needs of the products, while concurrently aiding personal growth

CONTACT

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SOCIAL

bhaumikmistry.github.io
Bhaumikmistry

SKILLS

- C++
- Python
- GPU/CUDA
- Machine Learning (DT)
- Pattern Recognitions
- Android SDK
- Linux / Win.

EDUCATION

New Jersey Institute of Tech.
Master of Science, *Dec'16*
Electrical Engineering,
cum laude, GPA 3.7

University of Mumbai
Bachelor of Engineering, May'14
Electronics and Telecom. Engineering

INTERESTS

- Art and graphics
- Open source contribution

EXPERIENCE

Medica Corporation, Bedford, MA *Feb'17-present*
Software Engineer – Image Processing and Machine Learning

Image Processing and Classification.
- Developed and profiled image processing libraries in C++ and CUDA on Jetson Tegra X2.
- Led a small team of chemists and software engineers to work on segmentation, analysis and classification of QC material used instead of blood for machine stability.
- Assisted in research and development work on red and white cell segmentations, cell analysis, and cell classification using Decision Trees.

Android Development and Cross platform
- Android Development of debug GUI for internal testing of different modules of code.
- Maintained cross platform libraries and API for Linux and Windows environment.

High Performance Computing and Multithreading
- Improved run time complexity by developing a multi-threading job scheduler to be used by image processing module for CUDA, image classification module on CPU and image capture module on CPU, synchronized communication with hardware module and other multiprocessor communication jobs, on limited space and processing power.

Testing and Continues Integration
- Handling CI tools for the team includes setting up Jenkins jobs for cross platform builds, node creation, static analysis and overnight large data processing for collected data.
- Test driven development using Google test used for C++ image processing modules.

Tools Development, Microsoft Foundation Class Library
- Designed and developed GUI for classification tool to be used by data analysis team for manual classification of QC material and blood.
- Spatial calibration and cartridge alignment tool with 3-dimension target search.

RESEARCH WORK

Independent Research and Master's project *NJIT* *Jan-Dec'16*
Under professor Dr. Yun Shi.

- A one-year research project. Topic: Implementation of seam carving, seam insertion and detection of it using ML.
- Assisted PhD student on data collection, classification and code development.

Image Analysis *NJIT* *Sep-Dec'16*
Research Assistant

- Image post-processing, segmentation and tracking of stem cells.
- Tracking cell's path towards attractive chemicals from a maze to understand the decision-making ability of the cells.

Developer, Intelligent Transportation System (ITS), *NJIT* *Jan-Aug'16*
Research Assistant

- Android app development, using location services, Bluetooth and Wi-Fi modules to navigate visually impaired target between traffic intersections.

PUBLICATIONS

[1] Improving Development Times by Reusing Flexible Hardware and Software Components. Mumbai, India. Bhaumik Mistry: *International Journal of Students Research in Technology & Management Vol 1 (06), October-December 2013, ISSN 2321-2543, pg. 619-623*