Komal Gyanani

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EDUCATION

M.S. in Computer Science **Stony Brook University – New York, USA** Expected Graduation: Dec 2018

Courses: Artificial Intelligence, Introduction to Computer Vision, Computational Biology, Analysis of Algorithms

B.E. in Computer Science (Aggregate GPA 3.98/4.00) **Faculty of Technology and Engineering, Maharaja Sayajirao University of Baroda, India** Jul 2009 – May 2013

TECHNICAL SKILLS

Language/Framework: Java, Python, C, C++, OpenCV, HTML, CSS
Tools: Oracle 11g, IBM DB2, MySQL, Teamcenter Unified, JIRA, Tortoise SVN, Git, Jenkins
OS: Windows, Linux

ACADEMIC PROJECTS

- **Computer Vision techniques – CSE 527 Introduction to Computer Vision, Fall 2017**
  - Worked with Machine learning models in Computer Vision using Tensorflow
  - Implemented vision techniques like applying image filters, features and stitching, object detection and tracking, interactive segmentation using superpixels and maxflow and deriving structure from motion in OpenCV and Numpy
- **Pacman – CSE 537 Artificial Intelligence, Fall 2017**
  - Designed the famous game using Python. Implemented uninformed and informed problem-solving algorithms, and heuristic functions for efficient game navigation. Also implemented multi-agents adversarial search algorithms.
  - Encoded Bayesian Network principles for game design in Pacman ghostbusters.
- Designed a Golomb ruler using CSP techniques of pure backtracking, forward chaining and constraint propagation.
- **Long Read Genome Mapping Algorithms – CSE 549 Computational Biology, Fall 2017**
  - Currently working on implementing Min-Hash and Containment algorithms in C++ and comparing the results with simulated data for long read genome sequencing
  - The project also includes designing a mapper function that checks for similarities to map long reads to genomes

WORK EXPERIENCE

Software Engineer **Geometric PLM (HCL Technologies), Pune, INDIA** Nov 2016 – June 2017

- Worked in Agile model to develop a customized Teamcenter AWC environment for BMW to automate the gap analysis, using GWT toolkit and Sencha GXT and Teamcenter services (SOA) on client side and C++ for server applications
- Worked in close collaboration with the onsite business analyst for DoR and DoD of two sprints
- Awarded "QWiz" – quality champion team of the quarter maintaining high delivery standards during Q1 2017

Solutions Developer **TATA Technologies, Pune, INDIA** Jan 2014 – Nov 2016

- Led a team of ten in preparing a comprehensive presentation for the client highlighting the value addition of $65 million over the past decade
- Led the project team to ensure project readiness for CMMI level 3 certification
- Designed a web-application, using Java EE technologies, struts framework and C++, for the multi-site architecture of Fiat Chrysler Automobiles to generate real-time vehicle data sync status reports. For optimized handling of large vehicle data, a combination of client-server utilities along with report caching mechanisms was implemented to minimize turnaround time for report generation
- Suggested and designed a business development initiative for process optimization using C, C++, and Perl scripts to generate reports and automate vehicle structure completion by importing data from remote sites with annual savings of $100K
- Designed functionality for document management for QC/QA with regards to manufactured parts using Java EE technologies and SWT toolkit, adding to the product portfolio of the organization
- Created a UI in Teamcenter for entering product details in localized character set (Kanji – Japanese characters) in the form of an XML file attached to the part

UNDERGRADUATE PROJECTS

- **Digital Steganography and Watermarking tool**
  - Designed an application using core and advanced java concepts, with LSB and AES encryption algorithms to securely encode text messages in image files and provide text – on – image and image – on – image watermarking
- **Bakery Management System**
  - Designed standalone and web applications, using core and advanced java concepts like Servlets, Remote Method Invocation, JDBC, Ad-hoc network and AWT packages and Oracle 10g for backend, for automating transactions of a local bakery

ACHIEVEMENTS AND EXTRA-CURRICULAR ACTIVITIES

- Volunteered in an NGO, "Pune Learns", conducting classes aimed at spreading English literacy in the community
- Head Organizer of "The Showdown", paper presentation event of Maharaja Sayajirao University
- Winner for two consecutive years in technical paper presentation organized by Computer Society of India, Vadodara Chapter