

Gaurav Shah

Web Integration Developer at Bon Secours Health System

gaurav20238@yahoo.com

Summary

I am easy going, intellectual, and always like to keep myself busy. I always look at my life from a traveler's prospective who is new to the place and open minded to learn everything possible to enhance travelling experience. My career goal is very simple, "Prepare myself to survive in this fast changing technology and rapidly growing computer era by preserving simplicity and adopting good changes". I have knowledge of Business and Engineering major both. Some of my specialty fields are Product development, Entrepreneurship, Computer engineering, Research, Programming, Web development, Database administrator and Project management. In next phase of my career, i want to focus towards how to Improving UI/UX, Optimizing business workflows, Team lead, and Project management.

Experience

Web Integration Developer at Bon Secours Health System

December 2014 - Present (1 year 2 months)

My core duty includes of participating in the development, design and support of web, mobile and data integration in an effort to enhance usability of the ConnectCare (branded Epic EHR system) application suite and SharePoint. Also, working closely with a number of teams that include the Web Portal Team, Enterprise Information Technology teams and the ConnectCare Integrated Architects.

Back End Developer at Virginia Commonwealth University

November 2013 - December 2014 (1 year 2 months)

Developed user friendly and custom web applications using various back-end programming languages, relational databases, CMS, and other modern web technologies.

Web Developer at Virginia Commonwealth University

July 2013 - May 2014 (11 months)

My duties were to design custom MVC architecture on Django framework with Python platform, for "Research and Experience Opportunities for Students (REOS)" project. It is mainly a job portal dedicated for research opportunities, and make it easy to collaborate and find matching opportunities with students. I have had implemented functionality of auto post on Facebook feature, when the new job is posted. Designed workflow to create, manage, and apply job. Handling secure file upload and download. Also, enhanced look and feel of the website by using lot of HTML+CSS, and bootstrap framework.

Research Assistant at Virginia Commonwealth University

April 2011 - July 2013 (2 years 4 months)

I was an undergraduate research assistant at the Intelligent Sensory Laboratory, supported by Dr. Motai's research grants including NSF Research Experiences for Undergraduates for over 2 years. I have worked with Dr. Motai at VCU on various projects such as Human Tracking, Motion Capturing using VICON, and Data collection for research paper. I have published a paper on topic of 'Human tracking with an infrared camera using a curve matching framework' as a first author. Also, mentor two group of 3, total 6 students for their senior design project in Dr. Motai's lab.

Software Developer at Ayers Electronic Systems, LLC (aE)

May 2012 - December 2012 (8 months)

My duties were to work on company's defect list in their current suites of various applications using .NET framework and SQL database. These applications mostly use in a transportation industry in order to provide real time tracking of vehicle information, vehicle health, passenger information and many other features. Also, worked on internal website of Association of American Railroads (AAR) using Drupal 7 CMS. This website mainly provide functionality to allow privilege user role to upload 'Railroad Messages' offline database, and make it searchable for other registered user. Additionally, enhanced it with more reporting, customization, workflow, and improving look 'n feel of the site.

Research Programmer at Virginia Commonwealth University

May 2009 - May 2012 (3 years 1 month)

My duties were include making protein structure and simulating them using GROMACS. Also used VMD tool to monitor and take snapshot of protein structure. Mainly processed protein structures using linux bash shell command line, and simulate jobs on super computer at VCU. Upon completion of simulations analyze the data, and calculate binding free energy using provided formulas by lab supervisor. While i wait on simulations to finish, i manage lab's hardware and network issues. Also, maintained backup server and web server.

Website Developer at Work Skills First, Inc.

February 2011 - January 2012 (1 year)

My duties were include to completely redesign company's website and add dynamic functionality to it. Provided dynamic platform to create and take 'Applicant Screening Test' which requires very good use of programming and web developing skills such as PHP, MySQL, HTML, CSS, JavaScript.

Summer Intern at Federal Reserve Bank of Richmond

May 2011 - September 2011 (5 months)

Worked as an intern over the summer 2011 with large group of students. We have worked on many projects including some being independent and some done in a group. Individually, i have used Visual studio and SharePoint Designer to design internal website and design a workflow for the ambassadors. I have also worked on research paper on a classified topic. In team, i have worked to create video presentation for "Recruiting and Retain College Grads", developed internal websites for Interns to pass on information interns to interns, and enrolled in many other volunteer activity for the local community as well.

Student Worker at Virginia Commonwealth University

January 2009 - March 2011 (2 years 3 months)

Duties includes perform office work, application shorting, filing, patch heading and scanning student's admission applications.

Life Skills Coordinator at CXI

September 2008 - December 2008 (4 months)

Work as a part of co-op position sponsored by school of information system. My duties were includes providing IT customer support by providing system upgrade, Active Directory maintenance, SAP management tools, and IT asset management.

Manager at V. Parshuram and Company

January 2005 - August 2008 (3 years 8 months)

I have managed manufacturing unit of fertilizers and wholesale distributorship of fertilizers, pesticides, and home products. Provided IT support such as programming for accounting applications, and designing website.

Computer Engineer at Desktop Creators

January 1999 - January 2005 (6 years 1 month)

My duties were includes programming and web site designing using various tools and platform.

Certifications

Corporate Responsibility and HIPPA Education 2015

HealthStream January 2015

Summer Student Research Program

Virginia Commonwealth University July 2009

Advanced Diploma in Computer Hardware & Networking - ADCHN

Jetking Infotrain Limited December 2000

Chronicles Install Utilities Certification

Epic License Epic 2014 January 2015

Hyperspace Configuration

Epic License Epic 2014 January 2015

Chronicles Non Programmer Certification

Epic License Epic 2014 January 2015

Interconnect Programmer

Epic June 2015

ICD-10 (Intro & Structure)

Precyse July 2015

Chronicles Database Programmer

Epic July 2015

Web Intelligence: Report Design

Volunteer Experience

Community Service at Tiranga, Indian Nationals at VCU

September 2008 - May 2013 (4 years 9 months)

Worked with team to help set up stage, organize chairs, serve food, and taking photography.

Publications

Human tracking with an infrared camera using curve matching framework

EURASIP May 3, 2012

Authors: Gaurav Shah, suk lee, Arka bhattacharya, yuichi motai

The Kalman filter (KF) has been improved for a mobile robot to human tracking. The proposed algorithm combines a curve matching framework and KF to enhance prediction accuracy of target tracking. Compared to other methods using normal KF, the Curve Matched Kalman Filter (CMKF) method predicts the next movement of the human by taking into account not only his present motion characteristics, but also the previous history of target behavior patterns-the CMKF provides an algorithm that acquires the motion characteristics of a particular human and provides a computationally inexpensive framework of human-tracking system. The proposed method demonstrates an improved target tracking using a heuristic weighted mean of two methods, i.e., the curve matching framework and KF prediction. We have conducted the experimental test in an indoor environment using an infrared camera mounted on a mobile robot. Experimental results validate that the proposed CMKF increases prediction accuracy by more than 30% compared to normal KF when the characteristic patterns of target motion are repeated in the target trajectory.

Normal mode analysis guided investigation of crucial inter-subunit contacts in the cAMP-dependent gating in HCN channels

The Biophysical Journal May 22, 2012

Authors: Gaurav Shah, Farzana Marni, Shengjun Wu, Xin-ping Xu, Amber R. Hackett, Changan Xie, Lin Liu, Qinglian Liu, Sabisha Shrestha, Lei Zhou

Protein structures define the complex network of atomic interactions in three dimensions. Direct visualization of the structure and analysis of the interaction potential energy are not straightforward to pinpoint the atomic contacts crucial for protein function. We used the tetrameric HCN channel as a model system to study the intersubunit contacts in cAMP-dependent gating. To obtain a systematic survey of the contacts between each pair of residues, we used normal mode analysis, a computational approach for studying protein dynamics, and constructed the covariance matrix for C-# atoms. The significant contacts revealed by covariance analysis were further investigated by mutagenesis and functional assays. Among the mutant channels showing phenotypes that are different from the wild type, we focused on two mutant channels that express opposite changes in cAMP-dependent gating. However, subsequent biochemical assays on

isolated C-terminal fragments including the cAMP binding domain only revealed minimal effects on cAMP binding, suggesting the necessary to interpret the cAMP dependent allosteric regulation at the whole channel level. For this purpose, we applied the patch-clamp fluorometry technique and observed correlated changes in the dynamic, state-dependent cAMP binding in the mutant channels. Altogether, this study not only provides new perspective on the inter-subunit contacts in the allosteric coupling in the HCN channel but also illustrates an effective strategy for delineating important atomic contacts within a structure.

Projects

Design dynamic website with eCommerce system

January 2005 to January 2008

Members:Gaurav Shah

Completely hand coded dynamic, eCommerce website using LAMP developing methodology. This website supports online order system, order processing workflow, and reporting.

Design dynamic platform for applicant screening tests

January 2011 to January 2012

Members:Gaurav Shah

This re-designed website allows admin to create and modify "Applicant screening tests" and later applicant can come to website and take the test.

Simulationg HCN protein structures in order to force opposite binding with cNMPs and analyze the results

May 2009 to May 2012

Members:Gaurav Shah, Andrew Walsh

In this project we have simulated various HCN protein structures using GROMACS and VMD simulation tools on a super computer. Our sole purpose of simulating these proteins were to determine what if we bind cNMPs in opposite confirmation to the protein and analyze the results to see how they react. In order to process this, we initially apply energy to hold it to opposite confirmation and simulate the protein. Then, we reduce the energy to zero in next simulation. Then, we let the protein stabilize in next simulations. Here each simulation is about 5 to 20 ns long and generate data for each steps which provides very good observation of the situation.

Designing internal website of AAR using Drupal CMS

May 2012 to December 2012

Members:Gaurav Shah, Phuoc Vo, Michael Tonnesen

Worked on internal website of Association of American Railroads (AAR) using Drupal 7. This website mainly provide functionality to allow privilege user to upload 'Railroad Messages' offline database and make it searchable by other registered user. Additional enhanced it with more dynamic features and workflow as per project's requirements.

Research and Experience Opportunities for Students (REOS) Website

July 2013 to Present

Members:Gaurav Shah, Steven Bradley, Nihar Sheth, Megan Martinez

I worked in a team of 3 members in order to create Research and Experience Opportunities for Students (REOS) project's website. We have used MVC architecture on Django platform and Python framework. This project has research opportunity listing, approval and apply workflow. Facebook integration to post contents dynamically on project's Facebook page. Also, it include smart-search functionality to match opportunity with eligible candidate in the University and send notification to Faculty and Students as well regarding the match. Old URL: <http://reosvcu.appspot.com>

SMART IRRIGATION SYSTEM

January 2014 to May 2014

Members:Gaurav Shah, Scott Francy

I have worked in a group of two on this project and we choose to design smart irrigation system that can water a field in a smart way to save water and field by not over or under watering it. We choose Vertex-4 FX12 FPGA for our embedded Linux and programming. The inputs for this system were user entered watering schedule, weather prediction data from Yahoo API, temperature and moisture sensor data from field to make batter decision. Based on this inputs, our design will analyze and override user schedule to prevent over or under watering the field.

ROBOT COMPETITION

August 2012 to December 2012

Members:Gaurav Shah, Amos Ajo

I have worked in a group of two on this robot competition. We have made our own robot from scratch including PCB design for PIC 18f4550 for embedded programming. This robot was equipped with distance sensor, and reflectance sensor. We programmed this robot to mainly perform follow black stripe, maze solver, and drawing an art on paper. We choose hourglass for our drawing on paper.

Analytic Reporting Dashboard - URMetrics

Members:Gaurav Shah

This platform was designed to manually enter analytic data, for some analytic source pull automatically, and show various reporting for monitoring purpose. • Create relationship among site, analytics source, outcomes, and targets using relational database structure, as shown below • Allow admin to create relation, and design profile for each site to measure analytics • Automatically pull analytics data periodically to site's database • Also, allow manual data-entry for not supported targets/ analytics source • Various custom reporting using graphs and tables

Manage Snippets of Code - URSnippets

Members:Gaurav Shah

This platform is more like JsFiddle / JSBin to manage snippets with added custom functionality like tags, filter by keywords, and asset management.

Abvirichmond.com Responsive Site

November 2014 to December 2014

Members:Gaurav Shah

Created fully responsive site for ABVI Sandston motel.

Design a responsive static site for America's Best Value Inn Motel

January 2014 to Present

Members:Gaurav Shah

Completed designing upgraded website for America's Best Value Inn (ABVI) Sandston, VA with added feature like responsive design, batter UI/UX, and quickly needed to up and running in a tight deadline.

Languages

English

Gujarati

Hindi

Courses

Bachlor of commerce, Economis and Accounting

The Maharaja Sayajirao University of Baroda

Economics ECON

Business Managements BM

Accounting ACC

Business Organization and Management BOM

BS, Computer Engineering

Virginia Commonwealth University

Microcomputer System EGRE 364

Advanced Digital Design EGRE 427

Advanced Programming using C++ CMSC 246

Algorithm Analysis W/ Advanced Data Structure CMSC 401

Skills & Expertise

Programming

Python

MySQL

C++

Microsoft Office

JavaScript

Web Development

Matlab

C

PHP

Software Engineering

Algorithms

HTML

Research

SQL

.NET
HTML + CSS
Linux System Administration
Java
Visual Studio
cPanel
Drupal
Multisim
jQuery
Xilinx
GIMP
MPLAB
Circuit Design
ModelSim
Computer Engineering
MVC Architecture
Product Development
Entrepreneurship
MIPS
CMS
Version Control
Assembly Language
Embedded Software Programming
xAMP
Responsive Web Design
Bootstrap
Epic Systems
Chronicles
Amazon Web Services (AWS)
AngularJS
Multi-OS App Development
Full Life Cycle Implementation
Cordova
Symfony

Education

Virginia Commonwealth University

BS, Computer Engineering, 2008 - 2014

Grade: 3.3

The Maharaja Sayajirao University of Baroda

Bachelor of commerce, Economics and Accounting, 2002 - 2005

Interests

Watching movies, talking, making new friends, listen to music, keep myself busy.

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1 person has recommended Gaurav

"Mr. Shah redesigned the employment testing platform for Work Skills First, Inc. We are pleased with the final product. He is responsive to feedback and is collegial. Mike McDaniel"

— **Michael McDaniel, Ph.D.**, was Gaurav's client

[Contact Gaurav on LinkedIn](#)