Amit Tomar

At the cusp of Arts and Computer Science..

✆ +91-8884911042
✉ amit.tomar@iiitb.org
 github/Amit-Tomar/
 linkedin.com/in/amittomar1/

Keywords : UI/UX, Product Usability, Operating Systems, Visualization, Computer Graphics, Automotive Infotainment .

Education

2013–2015 (Expected)	**M.Tech.**, *International Institute of Information Technology*, Bangalore, **CGPA : 3.05/4** (Till date). Currently pursuing with major Computer Science.
2006–2010	**B.Tech(Hons.)**, *Meerut Institute of Engineering and Technology*, **75.5**%. Dissertation : Traffic analysis based automatic traffic light controller
2004	**Class 12th**, *CBSE, Army Public School*, Meerut Cantt., **78.6** %.
2002	**Class 10th**, *CBSE, Army Public School*, Meerut Cantt., **81.6** %.

Work Experience

July 2014	**Teaching Assistant**, *Introductory C Programming*, IIIT-Bangalore. Assisted Prof. R Chandrashekhar in teaching and helped students understand and debug assignments.
Dec-2010 to July-2013	**Systems Engineer**, **Embedded Innovation Lab**, Tata Consultancy Services. Worked in the Automotive domain for almost three years and was part of design and development teams of several middleware frameworks for In-Vehicle Infotainment Systems.

- Next generation IVI systems for year 2020 : Honda Motors R&D Lab:
  - Involved in design & implementation of IPC mechanism agnostic **IPC Framework** based on message queues.
  - Developed **Auto-Code-Generator** for Interprocess Communication Framework.

- New generation IVI systems : Beijing Automotive Industry Holding Co. Ltd.
  - Developed UI and controllers for Audio/Video Player, Image Viewer, Web Browser, Navigation, HandsFree, News Feed, Clock, Track A Friend, IP Radio, Image Viewer, Application Store, News Feed, Weather etc.
  - Developed **System Components Manager** for synchronization among several system components.

- IVI generation II : Embedded Innovation Lab - TCS
  - Involved in design & implementation of HMI tool agnostic **HMI framework**.
  - Worked with the team in attaining **GENIVI** compliance 1.0 for TCS X-86 platform.
  - Worked in the requirement gathering phase of **Telematics Application Framework**.
  - Gave product and framework demonstrations to several prospective customers.

Technical skills

Expertise	Qml based UI/UX design and development, GIMP.
Intermediate	C (C99), C++, Qt-5.0, Linux, POSIX Message queues, D-Bus .
Introduction	OpenGL, BOOST, HTML, JavaScript, D3.js, Version Control, μ-Controller 8051 .

Honors & Awards

July-2013	**99.08** Percentile in **GATE 2013**
June-2013	**Technical Excellence Award**, Tata Consultancy Services
Nov|Feb 2012	**Employee of the month**, Embedded Innovation Lab, TCS (**Twice**)

Extra Curricular

Feb-2014	Designed posters and was part of PR team for annual sports meet SPANDAN at IIITB.
2012-2014	Sucessfully completed *mini marathons* 5KM (once), 8KM (once), 10KM (twice).

Opensource Project Contributions

Jan-2014 to March-2014

GCompris (A GNU package) .
GCompris is a high quality, educational, software suite comprising of numerous activities for children aged 2 to 10. Implemented the Qt Quick version of game 'missing-letter', contributing around **1000 LOC** to the project.

https://github.com/bdoin/GCompris-qt/graphs/contributors

Academic Projects

Jan-2014 to Currently Working

Visualization for Security Analytics | Emc^2 - RSA | D3.js.
Investigated, identified and implemented effective and intuitive visualizations of security analytics, ensuring that the enterprise security incident response teams can not only consume the security analytics results, but also make better informed decisions with regard to its correctness and criticality.

Oct-2013 to Dec-2013

Minimalistic Kernel Development | C.
Implemented an absolute minimal Kernel, to understand the basic functionality of how Kernels are developed, build, linked and loaded into the memory. Also wrote drivere for video display manipulation, interrupt handler and a programmable interval timer.

https://github.com/Amit-Tomar/MinimalisticKernelDevelopment

Feb-2014 to March-2014

Implementation of Loop Subdivision algorithm for Interactive Surface Modeling | C++ OpenGL .
Implemented an interactive program that allows the editing and rendering of a mesh surface. The surface is refined through successive subdivision using a standard subdivision scheme. User will be able to edit the shape of the surface by dragging "control points" of the surface.

https://github.com/Amit-Tomar/Loop-Subdivision-For-Interactive-Surface-Modelling

April-2014 to May-2014

Animating Hierarchical Object Models using Custom Scenegraph | C++ OpenGL.
Implemented a program to simulate the motion of an articulated robot that moves blocks from one conveyor belt to another. Objects were modelled as logical hierarchical structures and a custom scenegraph was implemented in the process. Simple forward kinematics was used to animate the robot.

https://github.com/Amit-Tomar/Animating-Hierarchical-Object-Models-Using-Custom-Scenegraph

Feb-2014 to July-2014

Copy-Dog : Augmented Suffix Tree Implementation for Software Plagiarism Checking | C++ .
Implemented augmented Suffix Tree data structure for checking the plagiarsim in the codes submitted to various professors at IIITB. Given a set of programming assignments, this implementation checks for the plagiarism among all the files and generates a detailed report of the copied code along with the file names.

https://github.com/Amit-Tomar/Parametrized-String-Matching-Implementation-for-Software-Plagiarism-Check

Dec-2009 to May-2010

Traffic Analysis Based Automatic Traffic Light Controller | Embedded C .
Implemented an automated traffic signal, which controlled the lights on the basis of traffic analysis, automatically. This system takes into consideration the amount of traffic on each side at a particular instant, unlike the existing system which has a fixed amount of time allocated for a side, based on one time initial calculations.

https://sites.google.com/site/tabatlcs/

Hobby Projects

Nov-2013 to Jan-2014

Package of Games for Power Saving | Qt-Qml.
Implemented an educational games suite for 8-15 age group, to help them learn about energy saving. Games comprised of 'Power Sudoku', 'Bulb Buster', 'Smart Buyer'.

https://github.com/Amit-Tomar/EnergySavingGames

Interests

- Running Marathons
- Movie reviewing
- Infographics
- Digital painting

Others

StackOverflow http://www.stackoverflow.com/users/1093223/amit-tomar
GVC Lab http://www.iiitb.ac.in/GVCL/people.html
Behance http://www.behance.net/amitTomar
GitHub http://www.github.com/Amit-Tomar