Amit Tomar

At the cusp of Arts and Computer Science..

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IT generalist with 6+ years of experience in Frontend (UI, 3D Computer Graphics), Middleware & Backend (RESTful APIs).

💼 Work Experience

Aug-2019 to currently — **Software Engineer**, CK-12 Foundation.
Working on development of 2D/3D interactive content for K-12 education.

July 2015 to July 2019 — **Group Development Manager**, Avataar.Me.
Developing fashion-tech and backend for 3D graphical assets generation pipeline of virtual garments and Avataars.

- Implemented highly scalable **RESTful APIs** hosted over **AWS** for providing various Avataar operations as **PaaS**.
- Implemented fashion content pipeline by developing desktop based applications to transform and store 3D data.
- Implemented **OpenGL/ThreeJS** based renderers for user Avataar and apparels.
- Implemented several 3D graphics tools and automated tasks for seamless 3D content generation and consumption.

Technology Lead, Avataar.Me.
- Designed and developed a graphical tool suite for apparel designing professionals to virtually create apparels.
- Worked on performance analysis and enhancement of internal cloth simulation engine.

Dec-2010 to July-2013 — **Systems Engineer**, **Innovation Lab**, Tata Consultancy Services.
Was part of design and development teams for HMI and middleware frameworks for In-Vehicle Infotainment Systems.

- Involved in design & implementation of IPC agnostic and HMI tool agnostic **IPC & HMI Frameworks**.
- Developed **UI and controllers** for several applications including Audio/Video Player, HVAC, Web Browser etc.
- Developed System Components Manager for synchronization among several system components.
- Worked with the team in attaining **GENIVI** compliance 1.0 for TCS X-86 platform.

</> Technical skills

Frontend — HTML, Javascript, jQuery, Bootstrap, **D3.js**, **Three.js**, Google-Filament, **Qt**, **QML**, **OpenGL**-3.3, Blender.
Backend — **Python**, **Flask**, SQL-Alchemy, Redis, Celery, nGINX, Gunicorn, Swagger, RESTful APIs, **AWS**.
Systems — **C**, **C++11**, Message Queue, D-BUS, Microcontrollers.

⑂ Opensource Project Contributions

Jan-2014 to March-2014 — **GCompris (A GNU package)** , https://github.com/bdoin/GCompris-qt/graphs/contributors.
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' and 'Tower of Hanoi', contributing around **1000 LOC**.

📰 Publications & Patents

Nov-2016 — **NodeTrix-Multiplex: Visual Analytics of Multiplex Small World Networks**.
Agarwal S., Tomar A., Sreevalsan-Nair J: In Complex Networks & Their Applications , Springer, Cham.

Dec-2018 — **Virtual representation creation of user for fit and style of apparel and accessories (US Provisional)**.

🏆 Honors & Awards

July-2013 — **99.08** %ile in **GATE 2013**
June-2013 — **Technical Excellence Award**, Tata Consultancy Services
2012 — **Employee of the month (Twice)**, Feb-2012 & Nov-2012, Embedded Innovation Lab, TCS
2017-18 — **Most Valuable Performer of Quarter (Twice)**, Sep-2017 & Dec-2018, Avataar.Me

🏛 Education

2013–2015 — **M.Tech. in IT**, *International Institute of Information Technology*, Bangalore (IIITB), **CGPA : 3.22/4**.
Thesis: Augmenting NodeTrix for effective Small World Network Visualization

2006–2010 — **B.Tech (Honors) in CSE**, *Meerut Institute of Engineering and Technology*, **75.5**%.