

Ganesh Belgur Ramachandra

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EXPERIENCE

- **Software Developer** Hyderabad, India
Ramp Group, People Tech IT Consultancy Private Limited
<https://www.rampgroup.com/casestudy-generalmotors.html>
Oct 2020 - Present
 - Implementing an OpenGL ES 3.0 based renderer targeting Blackberry's QNX RTOS for General Motor's in-vehicular cluster and infotainment systems
- **Software Developer - R&D** Bangalore, India
MPC Film, Technicolor India Private Limited
<https://www.technicolor.com/create/vfx>
Feb 2017 - Jan 2020
 - Refactored Furtility as described in "Layering changes in a procedural grooming pipeline" (DigiPro 2018)
 - Improved preview performance of scenes with high density vegetation by about 40% with frustum culling
 - Implemented hero grass wrapping logic based on "Wires: a geometric deformation technique" (Siggraph 1998)
 - Refactored the hair generation tool for the new Pixar's *Universal Scene Description* based pipeline at Mill Film
- **Junior Developer - Pipeline** Bangalore, India
Xentrix Studios
<http://www.xentrixstudios.com/>
Jul 2016 - Feb 2017
 - Developed and optimized in-house C++ Maya plug-in for handling non-manifold geometry
 - Implemented improvements to digital asset checking and general quality assurance systems

EDUCATION

- **Amrita School of Engineering, Amrita Vishwa Vidyapeetham University** Bangalore, India
Bachelor of Technology in Computer Science and Engineering - 8.13/10.00 (Distinction) *Aug. 2012 - Aug. 2016*

PUBLICATIONS

- **Grammar Error Detection Tool for Medical Transcription Using Stop Words Parts-of-Speech Tags Ngram Based Model:** A novel approach in NLP for detecting grammatical errors in a text. A technical paper was presented on this approach at the Jawaharlal Nehru Technological University, Hyderabad and published by Springer.

PROJECTS - SOURCECODE AVAILABLE ON GITHUB

- **Comet:** A unidirectional path tracer implemented based on Peter Shirley's minibook series, PBRT book and various courses by Dr. Károly Zsolnai, Dr. Thomas Auzinger and Dr. Ravi Ramamoorthi.
- **Rosary:** A catalogue of modern OpenGL scenes demonstrating perspective projection, free-flying camera system, texture sampling, Phong lighting and shading models, shadow mapping and cube mapping.
- **DreamWorks FX Challenge:** A simulation of sparks flying in a projectile trajectory that collides with obstacles and splinters.
- **DreamWorks Steer Quest:** A flocking simulation of a herd of sheep avoiding static and dynamic obstacles for a hackathon by DreamWorks Dedicated Unit, India (SIGGRAPH 1987, Craig W. Reynolds)

PROGRAMMING SKILLS

- **Programming Languages:** C++, Python, Lua, Javascript;
- **Technologies, Frameworks and APIs:** OpenGL, WebGL, Pixar Universal Scene Description, Unity, Maya, Katana, Blender;

OTHER DETAILS

- **Film Credits:** Received multiple on-screen credits in high budget Hollywood feature films for software development: The Darkest Minds (2018), The Lion King (2019), Cats (2019) and Sonic the Hedgehog (2020). (Link: <https://www.imdb.com/name/nm10166225/>)
- **Volunteering:** Served as a student volunteer at the ACM SIGGRAPH Asia 2017 (Bangkok), 2018 (Tokyo) and 2019 (Brisbane); Volunteer/ Mentor at GAFX 2018, Bangalore; Organised various algorithmic hackathons at Amrita;
- **Languages:** English (Professional working proficiency); Kannada (Mother tongue);