

Sathyam Mohanram Vellal

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SUMMARY

Passionate, detail-oriented, hard-working, future recent-graduate and entry-level Software Engineer. Generalist with an ability to break down complex problems into modular, robust, scalable and maintainable software.

EDUCATION

University of Southern California, Los Angeles, CA

Master of Science (M.S.) in Computer Science (High Performance Computing & Simulations)

GPA: 3.38/4.00

Relevant Coursework: Computational Physics, Scientific Computing & Visualization, 3D Graphics

PES University, Bengaluru, India

Bachelor of Engineering (B.E.) in Computer Science

GPA: 8.85/10.00

WORK EXPERIENCE

PayPal Inc., Software Engineer

January 2014 - July 2016

Bengaluru, India

- Reduced detection of false positives in transaction fraud risk models, directly impacting annual revenue.
- Designed and developed next-gen Payouts experience, in-house Free Return Shipping activation and product experiences, mobile-wallet solutions (Telcel Pay and Claro Pay). Resolved and supported issues.
- Awarded for being proactive, contributions, and mentoring. Part of winning teams in product hackathons.

Boost::uBLAS C++ Library, Contract Developer

June 2013 - August 2013

Remote

- Developed new aligned allocator, that is guaranteed to allocate on word-aligned memory addresses.
- Modified and restructured core parts of library with better idioms for auto-vectorization by compilers.
- Modified and implemented more efficient BLAS routines to improve overall performance of library.

PROJECTS

Simulations and Econophysics

June 2017 - August 2017

- Examined role of agent-based modelling, molecular dynamics and kinetic theory of gases in Economics.
- Implemented kinetic wealth-exchange model, with and without savings, to simulate a simple economy.

Distributed Map Search

April 2017 - May 2017

- Implemented distributed map searching techniques, using A* and Multi-layered Overlay Method to find optimal routes between nodes in realtime, for a large dataset of Los Angeles's intersections.

Smart Personal Assistant

January 2014 - May 2014

- Developed an intelligent mobile assistant featuring Smart Alarms to automatically set alarms, and Smart Notifications to prioritize SMS and Email, based on calendar, schedules and preferences.

SKILLS

Programming

C/C++, Java, Python, JavaScript, Shell, Matlab

Computer Graphics

OpenGL, GLSL, CUDA, OpenCL, Shaders, GPGPU

Others

HTML/CSS, Node.js, React.js, React-Native, iOS, Android, Git, SVN

Science

Molecular Dynamics, Fluid-Dynamics, Generative Music, Cellular Automata, Linear Algebra