

Sathyam Mohanram Vellal

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SUMMARY

Passionate, detail-oriented, hard-working, future recent graduate and entry-level Software Engineer. Generalist with ability to break-down complex problems and translate into 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-vectorisation 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 prioritise 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