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