Jaidev Ramakrishna

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Professional Experience

Net Nanny   **Systems Software Engineer**   **Jan 2018 – Present**

- Conducting research in Applied Algorithms, Computing Theory, Parallel Programming, and Numeric Computation. Producing prototypes and optimized production implementations of new technologies, and integrating them into applications. Identifying and exploring new use cases to guide future research.
- Architecting infrastructure and building components of a distributed, cross-platform activity recognition and behavior monitoring system. Using Natural Language Processing and Machine Learning to analyze content and metadata, and to formulate predicates for real-time monitoring and blocking of web traffic.
- Applying Network Forensics and Cryptanalysis to protocol detection for extraction and analysis of specific payload classes from network packet streams. Writing low-level Operating System and Networking services for native access to platform features and hardware for performance-critical tasks.
- Porting legacy applications and technologies to new platforms. Rearchitecting them to improve performance, stability, and security. Ensuring full compliance with new legal and regulatory frameworks. Application testing, code review, managing releases, writing documentation and technical specifications.

Drexel University   **Machine Learning Researcher**   **Jan 2016 – Jan 2018**

- Conducted research into topics at the intersection of Electronic Privacy and AI, with particular focus on the Stylometric Analysis of Text using methods from Machine Learning and Natural Language Processing.
- Was part of a team that built a system which analyzes social media text to detect the presence and onset of PTSD and depression, and examined the applications of this type of method in deanonymizing attacks.
- As a Graduate Teaching Assistant, produced scripts for plagiarism detection and automated grading of assignments. Conducted teaching, tutoring, and lab sessions for hundreds of CS students across courses.

Software Engineering Skills

Programming Languages   Java, C, C++, C#, Python, Swift, Objective C, MATLAB, SQL, JavaScript, Bash
Software Packages & Utilities   GCC, LLVM, Git, Android SDK, JNI/NDK, Gradle, .NET, Jenkins, XCode, Fabric
Operating Systems & Platforms Windows, Linux, UNIX, Android, Mac OSX, iOS, Amazon AWS, Azure, GitLab

Academic Qualifications

Drexel University   **Masters in Computer Science**   **Sep 2015 – Jun 2017**

- **EDSAC Simulator** – Built a simulation of the EDSAC Computer and designed a high-level language to control it. Created an interactive shell interpreter with memory maps, debugging, logging, and scripting.
- **Sensor Mesh Protocol** – Designed a lightweight, application-agnostic, plane-separated, UDP-based transport protocol for reliable streaming of Sensor data on heterogenous publisher/subscriber networks.
- **Temporal Expression Extraction** – Researched use of Conditional Random Fields for Named Entity Recognition and built a system that precisely identified temporal expressions and the associated events.
- **Intelligent Game Agents** – Achieved high victory rate and optimal solutions in adversarial games and combinatorial puzzles with methods like A*, B*, Mini-Max, Monte-Carlo Search, and Alpha-Beta Pruning.

Mumbai University   **Bachelors in Computer Engineering**   **Aug 2009 – Jun 2015**

- **Enhanced Fish Eye Routing** – Routing protocol that partitions MANETs into virtual grids, dynamically maintains backbone links by electing gateway nodes, and algorithmically varies LSP transmission interval.