Sairam Krishnan

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OBJECTIVE
To obtain full-time software engineering position

EDUCATION
Carnegie Mellon University, Pittsburgh, PA
- M.S. in Electrical & Computer Engineering, Dec. 2014 [GPA: 4.00]
- B.S. in Electrical & Computer Engineering, May 2014
- Minor in Business Administration, May 2014

SKILLS
- *Languages* - English, Tamil, Spanish, French, Italian, Chinese
- *Programming Languages* - C/Embedded-C/C++, C#, Go, Java, Python 2/3 (+Pandas), PowerShell, Bash, Awk, Perl, HTML/CSS/JavaScript, Matlab, GNU Octave, R
- *Cloud Computing Technologies* - Apache HBase and Hadoop, Amazon Web Services (CloudWatch, SNS, S3, EBS, EC2, Elastic MapReduce), Google AppEngine, Heroku
- *General Tools and Technologies* - Windows, Linux, HTTP, SSL, TCP/IP, J2EE, JQuery, XML, AJAX, MySQL, Hibernate, Spring MVC, Django, Play!, Undertow, Bootstrap, Node.js, Express.js, ASP.NET MVC, Android, OpenCV, OpenNI, OpenMP, SIMD, CUDA, Arduino, Raspberry Pi, Vim, Eclipse IDE, Visual Studio, Git, Subversion

EMPLOYMENT HISTORY
Amazon Alexa SDE II (April 2018 - Present)
- Halved peak customer complaints by optimizing new-user registration process.
- Constructed GraphQL-based data aggregation service to increase modularity and reduce latency

SIG Senior Data Engineer (Nov 2016 - March 2018)
- Led team of 3 to utilize C++, Pandas, and Django to visualize firm's market-making transactions, generate real-time FINRA compliance violation reports

Microsoft OSG Core Software Engineer (March 2015 - Oct 2016)
- Established/enforced Windows Phone 10 OneSync power-consumption targets
- Guided managerial decisions through weekly reports, real-time dashboards from telemetry

Amazon Web Services SDE Intern (May 2014 - Aug 2014)
- Deployed optimized (15% speedup) logging system to >8 million customers
- Implemented script to build call traces and gather metrics from log messages

LeanFM Technologies Full-Stack Web Developer Winter Intern (Dec 2013 - Feb 2014)
- Developed Django admin interface for building managers
- Utilized Dojo Toolkit for 3D building visualization front-end

Web Applications Course Developer/Assistant (May 2013 - Dec 2013)
- Created cloud platform for course administration, instructed 105+ students as Agile Product Owner for their projects

NSF Cyberphysical Systems Researcher (Feb 2013 - Aug 2013)
Designed Python bacterial simulator to replace live culture experiments and integrate previous small-scale models

RELEVANT COURSEWORK
- *Amazon Machine Learning University*
- *CMU-* Cloud Computing, Web Applications Development, Financial & Managerial Accounting, Microeconomics I, Java Smartphone Development, How to Write Fast Code, Distributed & Real-Time Embedded Systems, Cyber-Intelligence & Cyber-Warfare
- *Coursera-* Fundamentals of Quantitative Modeling, R Programming, Intro to Spreadsheets and Models, Statistical Inference, Machine Learning, Foundations of Scala Programming, Programming with Google Go

PROJECTS
Synonyms Crawler, Spring 2015
Designed web crawler to generate N-levels of synonyms for user-specified word; displays results in D3.js tree, with 1st matching Google image for each node.

Drone-Megaddon: RTS Interface for Managing Drone Swarms, Fall 2014
Implemented end-to-end cyberphysical system in which high-level, StarCraft-like RTS interface could be used to control multiple drones.

Real-Time Embedded Linux Kernel, Fall 2014
Refashioned Android kernel into energy-aware RTOS via smart task scheduling and partitioning schemes

Embedded Capstone: Hand-2048, Spring 2014
Reconfigured hit game 2048 to use hand-motions as inputs; utliized Raspberry Pi and Asus-Xtion-Pro motion sensor in motion-sensing-and-actuating framework

Cloud Computing @ CMU, Spring 2014
- *End-to-End AWS-based Cloud Service*: Developed 2nd most cost-effective and peformant RESTful front-end API for analyzing 200 GB Twitter tweet corpus; leveraged Amazon's Elastic MapReduce to ETL corpus into HBase backend
- *Twitter Hashtag Similarities*: Computed 50-GB corpus' hashtag pairs' co-occurence counts via Hadoop, achieved 78% speedup over default solution
- *Wikipedia Page-Views Timeline*: Tracked Wikipedia 2014 English articles' monthly view counts via Elastic MapReduce; achieved $20 operating budget
- *N-an-Instant*: Simulated Google-Instant using n-grams from 10000-book corpus & Bayesian statistics
- *Image Taxonomy Interface*: Developed front-end interface to select from 256-categories/30607-images in DynamoDB.

MedHub: Medical Issues' StackOverflow, Spring 2014
Devised Android app to address patients' medical issues through crowd-sourcing, find nearby pharmacies, and track physical activity

Discrete-Time Elevator Simulation, Fall 2013
Led team of 4 in waterfall development process to implement the class's most robust and best documented time-triggered CAN-network-based Java elevator simulation

Stock Exchange Web Application, Spring 2013
Created J2EE-based, MySQL-backed online stock exchange, with bot AI to manipulate liquidity and tag clouds showing most popular stocks