Sairam Krishnan

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Narberth, PA 19072
US Citizen, Willing To Relocate

OBJECTIVE
To acquire full-time software-engineering/data-scientist 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

Susquehanna International Group Senior Data Engineer (Nov 2016 - Present)
- Designed REST API for server inventory management
- Led team of 3 and utilized C++, Pandas, and Django to visualize firm's market-making transactions and generate real-time reports on FINRA compliance violations

Microsoft OSG Core Software Engineer (March 2015 - Oct 2016)
- Established and enforced Windows Phone 10 OneSync power-consumption targets
- Guided OneSync & EDP managerial decisions through weekly reports, real-time dashboards from processed 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 Winter Intern - Full-Stack Web Developer (Dec 2013 - Feb 2014)
- Developed Django admin interface for building managers
- Applied Dojo Toolkit to front-end to refine 3D building visualization

Web Applications Course Developer and Assistant (May 2013 - Dec 2013)
- Instructed 105+ students and served as final projects' Agile Product Owner
- Created cloud platform for course administration and interactive lecture exercises (e.g., Spring-MVC/Hibernate/MySQL Survey app)

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

RELEVANT COURSEWORK
- *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

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 an energy-aware RTOS via energy-aware 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 an Android app to address patients' medical issues through power of crowd-sourcing, find nearby pharmacies, and track physical activity

Discrete-Time Elevator Simulation, Fall 2013
Managed team of 4 in waterfall development process; implemented ultradependable (50-75% fault tolerance - most robust and thoroughly documented in class), 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