Sairam Krishnan

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OBJECTIVE

To acquire full-time software-engineering/data-scientist position.

QUALIFICATIONS

Education
- Carnegie Mellon University, Pittsburgh, PA
- M.S. in Electrical and Computer Engineering, December 2014 [QPA: 4.0]
- B.S. in Electrical and Computer Engineering w/ Minor in Business Administration, May 2014

Work Sponsorship - US Citizen; willing to relocate.
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 (November 2016 - Present)
- Designed REST API for server inventory management.
- Led team of 3 to visualize firm's market-making transactions and to generate real-time reports on FINRA compliance violations. Utilized C++, Python Pandas, and Django.

Microsoft Corporation OSG Core Software Engineer (March 2015 - October 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 - August 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 (Winter 2013)
Developed Django admin interface for building managers.

Teaching Assistant for Web Applications Development (Fall 2013) - Instructed 105+ students, served as final projects' Agile Product Owner

NSF Cyberphysical Systems Undergraduate Researcher (Spring - Summer 2013) - Designed bacterial simulator to replace live culture experiments and integrate previous small-scale models

Web Applications Developer (Summer 2013) - Created cloud platform for course administration; developed Survey app (Spring MVC + Hibernate + MySQL) driving course

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.

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

End-to-End AWS-based Cloud Service, Spring 2014
Developed RESTful front-end API to analyze Twitter tweets; leveraged Amazon's Elastic MapReduce APIs to ETL 200-GB tweet JSON corpus into HBase backend; 2nd most cost-effective and most-performant solution in class

Twitter Hashtag Similarities, Spring 2014
Computed hashtag pairs' co-occurence counts in 50-GB corpus using Hadoop; 78% speedup over default solution

Wikipedia Page-Views Timeline, Spring 2014
Applied Amazon's Elastic MapReduce on Wikipedia's 2014 metadata to track English articles' monthly view counts; achieved $20 operating budget target

N-an-Instant, Spring 2014
Constructed custom Google-Instant using n-grams from 10000-book corpus and Bayesian statistics

Image Taxonomy Interface, Spring 2014
Developed front-end interface to select from 256 categories (30607 images total) stored in DynamoDB.

Accenture (ACN) Stock Valuation Analysis, Spring 2014
Prepared a formal "buy" recommendation based on financial ratios, organizational structure, and equity-management policies from Accenture's 2013 annual report

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

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

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