Prakash Natarajan

Software Engineer

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VISA: Canadian Permanent Resident (Authorized to work anywhere in Canada)

PROFESSIONAL ATTRIBUTES:

- Experience working on many different technologies like C#, GoLang, C++, Javascript, Java.
- Have hands on experience with Windows, Unix/Linux operating systems and IT Infra tools including but not limited to Docker, Kubernetes, Ansible, GitHub, Perforce, Visual Studio.
- Major strengths are being able to engage with customers to discuss business and/or technical requirements and achieve objectives within agreed time frame.

SKILLS:

- C#, C++, GoLang, Java, Python, JavaScript, HTML5, CSS3
- ASP.NET Core, .Net Framework, NodeJs, ExpessJs, ReactJs, AngularJS, Spring.
- Azure, AWS, Firebase (GCP), Ubuntu, Windows
- GIT, PERFORCE (P4)
- Ansible, Docker, Kubernetes
- SDLC, Incremental Methods, Testing & Debugging

EXPERIENCE:

FACTSET RESEARCH SYSTEMS   **Norwalk, CT, USA**   **Mar 2016 – July 2019**

SOFTWARE ENGINEER

MONITORING INFRASTRUCTURE:

- Architected the infrastructure for detecting downtimes in any of our services and created an alerting system for alerting the on-call person to look at the issue.
- Backend code for monitoring all our services is written using our C++ toolkit.
- Managed configuration in a Redis DB deployed at our Redis cluster.
- Webserver is written in Go (Golang from Google). It also handles changing and fetching the status of the machines in load balancer.
- Frontend is architected using ReactJS as each machine can be configured as individual component. Segregated the machines as production and staging boxes using ReactJS.
- Added capability to stop the monitoring of individual service within each box. This helped us to avoid pulling the entire machine our of the VIP while debugging the issue.
- Cached all assets by using web service workers.
- Added Opsgenie integration for alerting the team when something breaks.

ANSIBLE SUPPORT:

- Automated the windows server deployment using ansible. This reduced the deployment time by 80%. Configured ansible to check the service status of all the boxes.

ZOOKEEPER FOR DETECTING DUPLICATE NODES

- Our permissions publisher microservice detects duplicates by listening to a http server in all our machines.
- Removed this redundant http servers and used zookeeper nodes to detect duplicate users.
- This helped us to reduce the server load by 15%

TOOLKIT AND SERVER:

- Created chains publisher microservice for sending option chains stock data.
- Enhanced microservice based architecture of server code.
- Improved the toolkits functionality in C#, Java, C++.

AMAZON WEB SERVICES - LAMBDA   Seattle, WA,USA   June 2015 – Aug 2015
SOFTWARE DEVELOPMENT ENGINEER INTERN

DYNAMIC INTEGRATION

- Developed a framework for rendering User Interface dynamically from the configuration file.
- Data rendering in backend is managed by an interface implementation in Java.
- This reduced the time of adding a new application into lambda portal from two weeks to just 2 days.
- This also enabled easy code maintenance by abstracting the logic to JSON configuration file.
- Designed the front end with AngularJS 1.7, backend with Java Spring framework and scripting for accessing DynamoDB is done in Python

COGNIZANT TECHNOLOGY SOLUTIONS   Chennai, INDIA   June 2011 – Mar 2014
PROGRAMMER ANALYST

DEFECTS DASHBOARD

- Enhanced the dashboard which was used for displaying the time critical defects in ASP.Net, collaborated with quality assurance team for running and maintaining automated scripts and integrated the results with portal.
- I also created a mailing windows service in C#.Net to email the screen shot of the defect with additional details of the exception.

INSURANCE APPLICATIONS

- Owned 3 insurance industry applications for underwriters and handled solving the production issues for external customers

EDUCATION:

UNIVERSITY AT BUFFALO, STATE UNIVERSITY OF NEW YORK, BUFFALO, NY   **August 2014 –Jan 2016**

Master of Science in Computer Science and Engineering, GPA: 3.67 Relevant courses: Operating Systems, Machine Learning, Data Intensive Computing, Data Science, Distributed Systems, Algorithms, Fundamentals of Programming Language, Software Engineering.

ANNA UNIVERSITY, CHENNAI, TAMILNADU, INDIA   **Jun 2007 – May 2011**

Bachelor of Engineering in Electronics and Communication, GPA: 3.55

PERSONAL PROJECTS:

CODEFORCES RANKING NOTIFICATION SYSTEM

- Helps to subscribe to one more user for ranking changes in codeforces.com
- Notify if there is a change in rank of any of our friends.
- Architected the entire backend which is microservices of event driven queue-based model.
- Used Asp.Net Core webapi for api management and Asp.Net Core console app for manipulating items in queue.
- Stack: C#, ASP.NET CORE, RabbitMQ, Docker, MS Sql Server, Visual Studio Code.
- Code: https://github.com/prakashn27/codeforces-ranking-notification-system

SERVERLESS NUMBER TO STRING CONVERTER:

- Azure serverless function to get the string representation of a number.
- Eg. 123 gives "One Hundred twenty three"
- Support numbers up to 10 power 26, that is one with 26 zeros.
- Infinitely scalable serverless architecture, with minimal cost.
- Stack: C#, Azure Functions, Visual Studio Code
- Code: https://github.com/prakashn27/dotnet-numconverter

REMINDER APP:

- Architected the server for reminder app which alerts user based on spaced repetition.
- Server is written in Python; data stored in AWS dynamodb; deployed as AWS lambda functions; accessed using HTTP Trigger (AWS API Gateway); authenticated using AWS Cognito; uses Google's protobuffer as data interchange format. Currently in alpha stage yet to be release to public.
- Stack: Python, AWS Lambda, AWS API Gateway, Google's Protobuffer, AWS Cognito.

CERTIFICATIONS:

- Web Applications Development with Microsoft .Net Framework 4.
- Browser Rendering Optimization (Udacity Certification)
- Offline Web Applications Using IndexedDB & Service Worker (Udacity)
- Advanced Javascript by Kyle Simpson. (Pluralsight)