Abijeet Patro

SOFTWARE ENGINEER · TEAM LEAD

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Summary

I am a Node.js and PHP developer with 6 years of experience in the IoT domain with a focus on health care, and usage-based vehicle insurance. I have exposure on front-end technologies such as AngularJS, ReactJS and automation tools such as Ansible. I have also worked with various database systems such as MySQL, Cassandra and Redis.

I am a proponent of modern JavaScript and PHP having used both ES6 and PHP 7 to build applications. I love designing and architecting systems. Seeing smaller services seamlessly work together to achieve a larger goal brings me a lot of joy. I am also an advocate of all things Open Source. I'm a huge fan of Linux, and enjoy customizing my development environment.

My personal projects include a Markdown based note-taking application called Pustam. I have now given up development on Pustam in favor of Joplin, to which I occasionally contribute. I'm a core contributor to BookStack, a wiki platform. I'm also a part of the NextCloud design team.

Work Experience

Mentor, Team Lead & Software Engineer
Hyderabad, India

OSMOSYS SOFTWARE SOLUTION
May. 2015 - PRESENT

- Keeping track of what my team is up to and ensuring that they are not blocked with anything technically or personally.
- Reviewing code, setting up guidelines, adopting technologies and processes for the development team to follow.
- Interfacing with the client, understanding their requirements and taking full accountability of deadlines and quality.
- Designing and developing critical aspects of projects based on PHP and Node.js.
- Continuing to be part of the recruitment and training process for both experienced candidates and freshers.

Software Engineer
Hyderabad, India

OSMOSYS SOFTWARE SOLUTION
Jun. 2014 - Apr. 2015

- As part of the newly created PHP team, documenting development processes and exploring recommend approaches. Identifying various tools and libraries to be used during development.
- Developing PHP applications using CakePHP and WordPress. Writing automated tests using the behavior driven development (BDD) framework Behat.
- Interviewing and training freshers in web-technologies - HTML, CSS, JavaScript and jQuery.

R&D Team member
Hyderabad, India

OSMOSYS SOFTWARE SOLUTION
Sept. 2013 - May. 2014

- Building, maintaining and documenting various reusable C# components. Documentation was generated from C# summary statements using Sandcastle help file builder.
- Developing our first Android application that used Contacts, GPS and MS Dynamics CRM as the back-end via a REST API.

Associate Software Engineer
Hyderabad, India

OSMOSYS SOFTWARE SOLUTION
Oct. 2012 - Aug. 2013

- Interacting with the client, gathering requirement and handling data migration for their product.
- Website design and development using ASP.NET, HTML, CSS, JavaScript and jQuery.

Trainee
Hyderabad, India

OSMOSYS SOFTWARE SOLUTION
Jun. 2012 - Sept. 2012

- Undergoing training in HTML, CSS, JavaScript, jQuery and C#.NET.

Skills

Programming	JavaScript, PHP, Rust
Framework / CMS	NodeJS, Express, CakePHP, Laravel, WordPress, React, AngularJS, BootStrap, jQuery
Databases	Cassandra, Redis, MySQL, MariaDB
DevOps	Ansible, DataDog, Supervisor, PM2, Linux
Tools	Bash, Postman, Gimp, Meld, Code, NetBeans, Geany, nano, git, nsq, RabbitMQ, grunt
Project Management	PineStem, JIRA, Trello, Asana

Projects

Powerpath
Cleveland, Ohio

EMANATE WIRELESS

PowerPath (`http://www.emanatewireless.com`) is a clinical asset monitoring (CAM) unit that helps health care industry employees improve workflow, achieve lower costs, and enhance the quality of clinical care. It measures the AC power consumption and temperature over time for clinical assets such as patient monitors, bed warmers and refrigeration units etc.

Other than guiding the team, some of the aspects of the project that I was involved in include,

- Setting up the base on top of which further development for the API and the portal was done.
- Developed the JSON interface on the IoT device using Marvell SDK.
- Designing and coding the interface between the cloud server and the Powerpath device.
- Designing and coding the token based authentication system and the user role system.
- Writing a common interface to communicate between different databases - Redis, Cassandra and MariaDB.
- Designing and developing the various components involved in the alert notification system.
- Designing the structure for the incident management system.
- Manual setup of the production server.
- DevOps - Developing Ansible scripts to automate deployments and reduce downtime.

Programming	Node.JS, Express, AngularJS, JavaScript, jQuery
Database	MariaDB, Redis, Cassandra
Others	NSQ, Marvell SDK, Micro-services, Ansible, Linux

PineStem
Hyderabad, India

OSMOSYS SOFTWARE SOLUTIONS

PineStem (`https://pinestem.com`)is a project management tool that has been build with an Agile philosophy in mind. It has an integrated bug tracking tool, kanban board, billing system and various reports that provide insights into an employee's performance.

Other than guiding the team, some of the aspects of the project that I was involved in include,

- Setting up the base for the front-end code. Took into account the size of the project, functionalities needed and recommended guidelines when structuring the project.
- Providing directions to break down the monolithic back-end code base into smaller micro-services.
- Approving and overseeing the integration of any new plug-ins that were needed.
- Architecting the module based ACL system on both the front and the back-end.
- Designing the system that allows users to select their own timezone and date formats.
- Designing the back-end notification system that takes into account user preference while sending all user notifications.
- Analyzing and improving front-end portal performance, specifically on Internet Explorer and Edge.
- Performing the production server setup and laying down instructions to be followed for future deployments.

Programming	AngularJS, JavaScript, jQuery, Protractor
Database	MariaDB
Others	AngularJS Batarang, NSQ, Micro-services, GitLab CI/CD, Linux

Usage Based Insurance
Quebec, Canada

BASELINE TELEMATICS

Baseline Telematics (`http://www.baselinetelematics.com/`) is built to provide insurance agencies a platform that they could use to provide their customers a usage-based insurance for their vehicles. A telemetric device connected to the end users car transmits driving data to an API that processes the given data to determine the premium that the user has to pay.

I worked as a Team lead for the customer portal, and as a developer on the back-end API and admin portal. During this time, I worked on,

- Working on the collector API that collects the data sent from the devices connected to the car.
- Guiding and developing the WordPress portal used by clients to review their driving data, premium and contract via a SOAP based API.
- Integrated the open source Live Helper Chat platform into the front end and the back-end to allow chat personal and customers to interact.
- Worked on the back-end REST API that is used by the mobile applications to provide functionality similar to the portal.
- Developed the gamification platform using which contests and competitions can be conducted for users.
- Wrote game rules using Lua. Lua was chosen due to its ease of use which would allow insurance companies to create their own rules.

Programming	PHP, WordPress, CakePHP, Slim Framework, Lua, JavaScript, jQuery
Database	MySQL
Others	Google Maps, RabbitMQ

Counterpick *Sweden*

Counterpick

Counterpick (`https://counterpick.com/`) is a tool built for the players of the online game League of Legends that allows them to choose team compositions that will help them win the game over their opponents.

I worked as a senior developer on the project.

- Creating an algorithm to meet the client requirement. The algorithm was designed in such a way that certain amount of preprocessing can be done in order to keep runtime performance fast.
- Designing the structure of the system, deciding the components that will be needed, and the computation.
- Developing the core component, that contains the business logic that calculates the scores for the teams.

Programming	Node.js, JavaScript
Database	MariaDB
Others	NSQ, Babel, Jasmine

Open source contributor

I enjoy helping out and contributing to open source projects in my free time. It exposes me to a variety of development techniques. It has also helped me to be more compassionate and improve the way I ask my questions. I contribute to projects that I generally use at office or personally.

- **Pustam** (`https://github.com/Pustam/app`) - Initially started this as a way to keep track of my daily tasks without having to use a cloud server. Have now stopped development on this in favor of Joplin. Built using Electron, Node.js.
- **BookStack** (`https://www.bookstackapp.com/`) - Documentation software that I found at when looking for Wiki software for my company. Have been contributing to it ever since and have now becoming a maintainer. I have a self hosted version of BookStack for my wife and me to document our travels. Built using Laravel, MySQL and Vue.js.
- **Nextcloud** (`https://nextcloud.com/`) - Alternative to Google Drive and Docs. I came across this while looking for a self hosted file sharing software for office. I'm part of the Nextcloud/design team, helping improve the front end of the application. I have configured a Nextcloud instance for syncing my notes and saving important files. Built using PHP, MySQL, Ember and Vue.
- **Joplin** (`https://joplin.cozic.net/`) - Note taking app that I came across on Hackernews. I was previously using Pustam, but this already did a lot of the things that I wanted to implement. Contributing to features that I find useful and as requested on the issue tracker. I'm using Joplin with Nextcloud to sync notes across all my devices. Built using Electron, React, Node.js, React Native.

Awards

2015	**Unicorn Award,** Osmosys Software Solutions	*Hyderabad, India*
2014	**Garuda Award,** Osmosys Software Solutions	*Hyderabad, India*

Education

Ravenshaw University *Odisha, India*

B.Sc. in Information Technology and Management *Apr 2008. - May 2011*

National Institute of Information Technology *Odisha, India*

GNIIT *Apr 2008. - Apr 2012*