

# AVINASH ERUPAKA

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## Professional Summary

I am an AWS Certified Solutions Architect developing software application, solving business problems in various domains like Electronics & Sensing, Financial, Travel & Agriculture for the past 9 years. I expertise in building fast, responsive, intuitive, distributed, robust applications with web and mobile focus, both at small and enterprise scale. I have proficiency using tools like React.js, Redux, Bootstrap, Material Design for the front end, Node.js, Scala, Clojure and Java for the backend. I leverage AWS as a cloud provider. A Data Science, Machine Learning and Artificial Intelligence enthusiast.

## Skills

Functional Programming	Enterprise Architecture	Scalability
Java	Amazon-Web-Services (AWS)	Security
JavaScript	Deal with Data Volume, Velocity and Variety.	Design Principles
Scala	Apache Kafka	API Design
Python	DevOps, CI-CD	Automated Testing
Node.js	Hadoop	Engineering practices
Spring	IoT	Technology trends
Web technologies	Distributed Systems	Product Assessment
Mobile Development	Event Driven Architectures	Unix, Linux
Microservices	HVHA Applications	Agile, Lean
Relation and Non-Relational Databases	Performance	Machine learning
Cloud Computing	Scalability	Data Science
		Business Strategy

## Work History

### **Senior Software Developer -**

### **Employer: Bayer Crop Science.**

Creve Coeur, MO | 2017– Current

- Senior Full Stack Software Developer with a focus on DevOps and agile test-driven development in support of products for Monsanto Company operations platform.
- Designed and developed modular web components to be leveraged by manufacturing and marketing groups to make business decisions. Provide LOE for requirements, brainstorm on complex business problems and delivering working software in an iterative process.
- Setting up and maintaining our data layer, with DB tech such as PostGres, DynamoDB.
- Built responsive, cross-device applications from ground up using React, Redux, JavaScript, CSS, Scala and Node.js.
- Performed a technical evaluation for code quality, security issues, database schema scalability, workflow, usability and design.

## Products:

### **Outcome Based Pricing (OBP): (NA -Commercial)**

- Outcome Based Pricing combines field-specific customized prescriptions with our best-in-class Bayer products and an innovative pricing model to align price with outcomes.
- Part of OBP core technical team since beginning of 2019, helped setup the initial architecture, establish integrations patterns, asset scaffolding with industry standards.
- Participated in ERP product RFP's, providing opinion considering integration, scalability and master data etc.
- Lead data assets contribution discussions surfacing real needs and long-term scalability of the integration that caters our speed to market needs.

- Helped set up the digital agronomy space of OBP, that deals with farmer field enrollment, agronomic recommendations and offer creation integrating with climate corporations DFP, data science and data asset api's.
- Once the new AWS account model became main stream, spearheaded that effort, setting complete AWS cloud infrastructure single handedly. Still serve as an AWS Admin/SME for rest of product teams in OBP.
- Inline to the above setup automated CI-CD pipeline enabling OBP assets for continuous deployment. Evangelized DevOps, DevSecOps practices by building many inhouse tools.
- More recently leading the post contract workflow with planting and harvest reconciliation closing the business loop of OBP.
- Built OBP status and monitoring page (& architecture), that provides cost-efficient and robust status monitoring and incident reporting for OBP.

### **Market Product Information (MPI): (PCLM – Row Crops)**

- MPI is a now a global app that started out as a replacement for legacy MSPIS. This application allows product development managers of our commercial brands to rate, compare and position products based on their knowledge and experience. The data collected in MPI will be stored in PIM and delivered to Brand websites.
- This application significantly reduced the data aggregation tasks performed by the PDM's providing a simplified and intuitive presentation, help make decisions during the annual enablement meetings.
- This is a cross device compatible application that lets PDM's build and setup our commercial line of products coming through research pipeline.
- From tech stack standpoint we used React, Redux, Saga with Javascript for frontend and Node JS – Express based backend with a Mongo DB Database, leveraging Jenkins for CI/CD and deploying application to internal Cloudfoundry.
- Integrating and Consuming precommercial data from Product 360 api's dealing with confidential trait information.
- Investigating on cutting edge technologies and leveraging them in mainstream application.

### **Product Characterization: (PCLM – Row Crops and Vegetable)**

- Product characterization is a global app used to establish product characteristics by region and crop cycle. It allows for generation a Field Production Guide (FPG) that is used by the field production team, growers and licensees to produce a hybrid. Guides can be downloaded via desktop or mobile device.
- From tech stack standpoint we used React, Redux with Javascript for frontend and Scala with Akka HTTP for backend with a Postgres Database, leveraging Jenkins for CI/CD and deploying application to internal Cloudfoundry.
- With more than 20+ API's internally and this app has a complex data ELT workload for crop plan/portfolio data.
- Cross device compatible application that presents analytical data with modern chart UI's using D3 and google charts.
- Integration with Imagine application to use internal image repository.
- Setting up and maintaining our data layer, with DB tech such as MongoDB and Neo4J.
- Configured platforms including Akka, Akana, AWS and Jenkins.
- Integrating and Consuming data from various sources like Product 360, SPA etc.
- Investigating on cutting edge technologies and leveraging them in mainstream application

### **Other Contributions at Bayer:**

- Blog post on Robotic Process Automation for “[engineering.monsanto.com](https://engineering.monsanto.com/)”: [RPA-taking-robot-out-of-human](#)
- Worked with ELD's on Community Engagement App – “[Engagement](#)”.
- Presented talks on topics like CF to Fargate Migration, Jenkins Pipelines, Monitoring & Observability using lambstack to finance platform teams.

- As part of the tech-alignment tools initiative I had led group of cross-continent engineers (currently US, Argentina and Brazil). Establish architectures and roadmap for common problems like agile metrics, cost monitoring & alerting, engineering metrics using sonarqube

## **Senior Software Engineer (Contractor) - Enterprise Rent-A-Car**

**Employer: Lead IT Corporation.**

Weldon Spring, MO | 2014 – 2017

### **Products:**

### **Pricing Services:**

- Pricing services is a stack of 100+ SOAP and Rest based webservice that serve as a back bone for Enterprise Rent-A-Car's car rental business. These services are consumed both internally and externally serving about 3Billion transactions per month.
- Primarily responsible for design and development of technical specifications, architecture, new client onboarding, availability, scalability and resiliency for the core services with 99.9% uptime.
- From tech stack standpoint we used it was a Java J2EE, Spring based backend with a Oracle Database, leveraging Jenkins for CI/CD and deploying application to internal Datacenter utilizing Dynatrace for APM and Splunk for log aggregation and visualization.
- Developed regression test suite to verify services health before moving code to production.

### **Rental Segmentation:**

- Rental Segmentation is an initiative that EHI started to solve a business problem of "Increase sales by beating competition – Higher Adoption".
- This project involved collection of real-time rates of competitors like Avis, Budget etc. and run these rates through a proprietary pricing model that outputs a competitive pricing specific to a location or even at competing stores level. This initiative yielded ~33% sales increase in the first year of going live.
- From a tech stack standpoint, we used AWS cloud, Hadoop distributed solution, Akka Http, Mongo DB, leveraging Jenkins for CI/CD and deploying application to internal Datacenter utilizing Dynatrace for APM and Splunk for log aggregation and visualization.
- Instrumental in evaluating and bringing on new technologies such as ReactJS and AWS etc.
- Coached ELD's, key for introducing practices like Micro Services, Functional programming, Mob programming and Agile practices. This improved overall teams productivity.

## **Software Developer (Contractor) - Bank of America**

**Employer: Indus Valley Consultants.**

Austin, TX | 2013 - 2014

- Responsible for building a stack of web applications serving different corporate clients.
- Set up online payments with e-signatures, email scheduling, and PDF form creation.
- Interfaced with SOAP & REST endpoints, from Google to DocuSign to Payment API's.
- Created a customer-facing payment and management portal.
- Managed uptime and server management using VMware and Amazon cloud services.
- Applied ILM policies for different group of data to analyze how data can be deleted without impacting the application.
- Developed generic offline & online stored procedures for archiving & purging data.

## **Graduate Research Assistant – Wright State University**

**Employer: Wright State University.**

Dayton, OH | 2012 - 2013

- Developed and maintained internal university websites like alumni connect, international student portals and several student government applications.
- Implemented MVC architecture using spring eco system technologies, Java and Hibernate (Spring DAO) and used JSP, HTML and CSS for front end .
- Published REST API's to fetch data from Elastic Search clusters to return variety of information like organization histories, student records etc.

- Built REST API that streams data from different channels(Facebook, email's etc.), creates real-time events and pushing them to student volunteers who assist in student pick up and on boarding.
- Rewrote Indian Student association website with more fluid and modern design.
- Test new software packages and see if they can be used for our application.

## **Software Engineer**

### **MBR Informatics**

Hyderabad, India | 2011 – 2012

- Developed Web application and IoT apps for various clients.
- Hardware design (microcontrollers, sensors, gateways) based on client requirement.
- Performed device/chip I/O level testing and capturing metrics for benchmarking purposes.
- Built fresh user interfaces using HTML, CSS, javascript in turn publishing many reusable client libraries for other teams.
- Built SOAP & REST based API's to be consumed by various client's internal and external.
- Participated in Code migration and resolving code conflicts in various versions.

## **Education**

Master of Science: Electrical Engineering, 2013

Wright State University - Fairborn, OH

Bachelor of Technology: Electronics and Communication Engineering, 2012

Jawaharlal Nehru Technological University - Hyderabad, Telangana, India

## **Certifications**

Name	Year	Issuer
AI for Everyone	2020	deeplearning.ai (Coursera)
Digital Transformations	2020	Indian School of Business (Coursera)
Innovative and emerging technology	2020	Macquarie University (Coursera)
Foundations of Business Strategy	2020	University of Virginia (Coursera)
AWS Certified Solutions Architect	2020	Amazon Web Services
Machine Learning A-Z <sup>TM</sup>	2018	Udemy
IBM Blockchain Essentials	2018	IBM
Data Structure and Algorithms in Python	2018	edX - MITx
AWS Certified Developer	2017	Amazon Web Services
Big Data & Hadoop Developer	2015	Edureka
Certified Professional Java SE 6 Programmer	2012	Oracle

## **Accomplishments**

- Bayer LIFE award for outstanding performance towards OBP & other initiatives.
- Received “Value Award” and “Global Dominance Award” as a team for Product Characterization application (Global product part of Monsanto's PLCM pipeline)
- Received POB (Pat on the Back) from Business group for providing a solution to business problem and introducing new programming practices like Mob-Programming (at Enterprise Rent-A-Car)

## **Volunteer Experience**

- Mathematics Tutor (Kids under "No Child Left Behind Act of 2001, USA"), TutorCo, 2011
- President Indian Student Association, Wright State University, 2012
- Instructor @ YES Program (Software Engineering), Saint Louis Science Center, 2015