

Raminder Singh

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Project Lead & Solutions Architect

- Experienced project lead with over 16 years of experience across industries like healthcare, insurance, data integration and scientific research.
- Led data science initiatives, provided technical consultancy to projects in different diverse domains and research gateways projects.
- Instrumental in streamlining and improving data processing, enhancing productivity by workflow automation, and architecting technology solutions using latest technologies.
- Formal training in product development, design, market research, entrepreneurship, project management and data analytics through M.B.A. and M.S. in Analytics dual degree from Kelley School of Business at Indiana University.
- Outstanding interpersonal and communication strengths leveraged in implementing technical strategies.

Professional Experience

Beth Israel Deaconess Medical Center, Boston, MA

12/2016 – Present

Project Lead, Data Analysis and Management

Principal strategist and visionary project lead for the Berenson-Allen Center for Noninvasive Brain Stimulation. Leading multiple technology projects simultaneously and identify stakeholder's needs to provide customized technical solutions.

Key Accomplishments:

- **Data Management and Analysis:** Established data management platform for neurological data from 1000+ human subjects of size 30+TB using an open source neuroimaging platform.
- **Data Quality improvement Process:** Deployed a quality measure data processing pipeline for MRI data from the scanner to improve data collections quality and to reduce human intervention.
- **Neurological Data Science:** Configured standard data processing pipelines on Harvard's NCF Cluster and presently, enabling those pipelines using Docker on Cloud infrastructures.

Indiana University, Research Technologies, Bloomington, IN

01/2009 – 11/2016

Principal Software Engineer, 10/2012 – 11/2016

Provided leadership on solutions development, integration, and management for research projects. Applied cutting-edge technology knowledge for software design, development of strategy, and exercise knowledge of IT concepts, and project management methodologies. Interfaced with stakeholders to design and develop highly customized software systems using HPC and Cloud infrastructure.

Key Accomplishments:

- **Project Management:** Excelled in rapid application development and management of technical issues for the analysis of Photogrammetry data sets to create 3D models for AR/VR environments.
- **Technology Evaluations:** Designed solution for images and videos metadata extraction to improve project efficiency using Microsoft Cognitive Services, Google Vision analytics APIs for Media Digitization & Preservation Initiative to digitize 250K object collections.
- **Restricted Data Access:** Applied technical solutions to provide access to analytics platforms like SPSS, Stata, SAS to researchers for analyzing Protected Health Information (PHI) data.

- **Designing Genomics Pipeline:** Managed solution implementation on HPC systems for Human genomics assembly to pros and cons of current procedures of gene-sequencing techniques.
- **Technical Consulting:** Managed technology directions for several research projects in astronomy, biology, engineering and digital humanities, and published the findings.
- **Data Processing Pipeline:** Developed a solution to help researchers to understand molecular structures in solutions to help prevent Cancer, Thrombosis and Alzheimer's diseases.

Systems Analyst Programmer, 01/2009 – 08/2012

Provided critical technical support and participated in multiple research projects and workflow automation solutions for the science gateways group. Worked with the principal stakeholders to determine requirements and on-going technology needs.

Key Accomplishments:

- **Product Development:** Developed and managed the Apache Airavata project to solve scientific workflow and interface design challenges that resulted in a \$5M funding award from the National Science Foundation.
- **API designing:** Led the design of APIs development using REST and Apache Thrift interfaces for scientific discovery projects. Developed docker container on various applications for cloud infrastructure.

Adeptia Inc., Chicago,IL

07/2001 – 12/2008

Solutions Architect

Gathered requirements, developed solutions, traveled to client locations and conducted product training for different clients. Managed different phases of projects and assigned tasks to team members and led remote development teams.

Key Accomplishments:

- **Data Integration (ETL):** Analyzed NetSuite ERP transactions for data persistence and created business processes workflows to map request to persist data for PLAYAWAY Digital.
- **Insurance domain:** Designed and deployed an employee data management solution for Lincoln Financial Group to automate business processes (BPM).
- **API Development:** Designed SOA/REST based services that are compose-able, controllable and executable using remote API's.
- **B2B integration:** Designed and developed connectors for Salesforce (CRM) and EDI systems.

Technical Proficiencies

Programming: Java, J2EE, JavaScript, SAS, R, Python, SQL, REST, Web Technologies.

Statistical Tools and Expertise: JMP, SAS, SPSS, Tableau, Qlik, Excel Analysis, ETL tools.

Big Data Tools: Hadoop, Spark, Hive, Apache Airavata, TensorFlow.

Database Technologies: Oracle, MySQL, SQL Server, Cassandra, MongoDB.

Cloud Infrastructure: Amazon AWS, Microsoft Azure, Google Cloud, Salesforce, NetSuite.

Continuous Integration: Docker, Ansible, Github, Vagrant.

Education & Credentials

M.B.A. / M.S. in Business Analytics (dual degree with a focus in business strategy), Kelley School of Business, Indiana University, Bloomington, IN | 08/2017

M.S. in Computer Science, Maharishi Dayanand University, Haryana, India. 07/2003

B.S. with honors in Agriculture, Punjab Agriculture University, Punjab, India. 07/2001