Mohankumar S.

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Objective

Dynamic Engineering Manager with a proven track record at Spritle Software Pvt. Ltd., excelling in systems design and technical leadership. Spearheaded the development of a blockchain web application, leveraging Django and AWS to enhance project efficiency. Strong collaborator with expertise in cloud computing and product development, driving innovative solutions in complex environments.

Academic Details

Master of Computer Applications, Apr-2015
Madras Christian College - Chennai
CGPA: 85%

Bachelor of Science (in Computer Science), Apr-2011
S.I.V.E.T. College - Chennai
CGPA: 63%

Experience (Total experience: 9 Years)

1. **Spritle Software Pvt. Ltd., Mhuravoyal, Chennai, (December 2022 – Present)**
   - *Designation:* Engineering Manager
   - *Role:* Technical lead to the software and integration team and Systems designing
   - *Service Project 1 – Blockchain web application for supply chain management for cattle suppliers.* Front-end: React JS, Back-end: Strapi CMS (Node JS), integrated with Hyperledger Fabric private blockchain network, Database: MySQL
   - *Product 1* - Seewise.ai. Tech Stack: Django, Python, HTML, JavaScript, CSS, Database: PostgreSQL.
   - *Service Project 2*: Data acquisition tool with cloud annotation tool. Tech-Stack: Flask, React, Flask-SQL Alchemy, Basler camera (six cameras) with Pylon lib, AWS cloud.
   - *Service Project 3*: SmartStation for parcel packaging warehouses. Flask, AWS Cloud, OpenCV

2. **Sudha Gopalakrishnan BRAIN Centre, IIT – Madras, (June 2022 – November 2022)**
   - *Company Overview:* The Center for Computational Brain Research at IIT-Madras is developing a high-throughput computational and experimental pipeline to study cellular architecture in human brains. The project aims to handle 10-100X faster than currently available instruments and a computation engine to handle Giga-pixel and Tera-pixel level images.
   - Technical lead for the software, servers and integration team. Leading the team to fulfill the internal application developments (web applications, dev-ops, and server-side scripting), integration of different libraries and hardware, and integration of

Skills

- Systems design
- Cloud computing
- Technical leadership
- Team collaboration
- Design optimization
- Specification detailing
- Product development
- Django
- Flask
- Strapi CMS (Node JS)
- OpenCV
- Pandas and NumPy
- Python
- C++
- JAVA
- C# .NET
- Ethereum & HLF
- Android Studio
- Matlab
- Linux
- HTML, JavaScript
- PostgreSQL
- MySQL
- MS-SQL Server
- Linux
- AWS
- EC2
- DynamoDB
- S3
- Cloud formation

ML/DL algorithms into the existing modules.
- *Platform*: AngularJS, Python - Django, MySQL, Jenkins, Shell scripting, Docker containers (build and deploy).
 	
3. [**Healthcare Technology Innovation Centre (HTIC)**](#), **IIT – Madras, (Oct 2015 to – May 2022)**
- *Company Overview:*
HTIC, is a multi-disciplinary R&D centre at IIT-Madras
  • Sonio: Robotics, Ultrasound device & 3D Reconstruction library integration (C++), Integration of Universal Robots (UR5E) and the Clarius Ultrasound probe, with the 3D reconstruction library as a low-level API
  • Artsens - Pendroid (android version): Data acquisition and plotting a real-time graph
  • IQuant Kiosk - Embedded Windows OS. Immuno-analyzer kit, developed as an IoT-based kiosk machine. AWS, Java, JavaFX, C# .NET, Windows scripting
  • IQuant - Android platform
  • IQuant - Linux (C++ with IDS camera integration)
  • Retinopathy of Prematurity (RoP) is the project for the early detection of retinopathy from a set of fundus images. Tech-stack: Emgu-CV library (C# wrapper for OpenCV)
  • Automated Diet suggesting tool - web application (Drupal 7.54)
 	
4. *Ameex Technologies – OMR, Chennai, 9 months (internship)*
- *Designation:* Trainee
- *Projects Worked on:* Content Migration of Ubercart Products and User based Discounts – Web application (Drupal 7.54)
	• RDS
	• Lambda
	• Drupal 7

Domain Interests

- Image Processing: Open CV (in C++, C#, Python), Slicer, ImageJ, Ultrasound DICOM & Meta images for 3D volumes & registrations
- Robotics (UR 5E)
- Cloud service integrations (familiar with AWS services) and Systems design
- Cloud – Edge based IoT systems design and development
- DevOps: Servers deployments & setups, CI/CD with Jenkins – pipelines etc., Web servers (Apache, Nginx & Fast CGI), Dockers, Server Virtualizations

Presentations in International Conferences and Publications

- Presented the paper by *S. Kulasekaran, Feminna Sheeba, Joy John Mammen, B. Saivigneshu, S. Mohankumar*, entitled [*Morphology Based Detection of Abnormal Red Blood Cells in Peripheral Blood Smear Images*](#) in the **7th WACBE World Congress on Bioengineering 2015, National University of Singapore, Singapore** and was published in the **IFMBE Proceedings, Springer,** Vol. 52, pp. 57-60, DOI: 10.1007/978-3-319-19452-3_14.

- The paper by *Feminna Sheeba, Robinson Thamburaj, Joy John Mammen, Mohan Kumar, and Vansant Rangslang* entitled [*Convex Hull Based Detection of Overlapping Red Blood Cells in Peripheral Blood Smear Images*](#) was published in the **IFMBE Proceedings, Springer,** Vol. 52, pp. 51-53, DOI: 10.1007/978-3-319-19452-3_14.

- Presented the poster by *Nithish R., Kathick S., Mohankumar S.* entitled *Watershed Transforms used in the Segmentation of Cells in Peripheral Blood Smear Images* in the **7th WACBE World Congress on Bioengineering 2015, National University of Singapore, Singapore.**

Projects Done (on college)

- *Segmentation of Overlapping Red Blood Cells in Blood Smear images: as part of the Software Development Lab in V Semester*
  - The project aims to segment two or more Overlapped Red Blood Cells in the Blood Smear images. The dip points where the cells overlap is found by analyzing the distance between the centroid and the boundary points of the overlapped blob. To get expected results the blobs are smoothed using morphological operations before analysis. Based on the number of dip points the overlapped cells are split.
  - The Domain of the project is Image Processing
  - The platform used is Java with NetBeans 8.0
- *Content Migration of Ubercart Products and User based Discounts: Project in VI Semester*
  - The project aims at developing a Web Application for a Sensor company to maintain their manufactured sensor products. The Web application is developed using Drupal 7 as front-end and MySQL as back-end. The Site was mainly developed in order to help the user to explore the sensor company's latest sensor product releases, detailed product information and to provide technical support for the customers. The site also provides online purchasing facilities to order the sensor products and to give discounts for the customers.

Extra-Curricular Activities

- Type-Writing lower level (distinction)
- System hardware's, Servers configuration & Networking

Personal Details

DOB	:	Oct 15, 1990
Sex	:	Male
Language known	:	Tamil & English
Nationality	:	Indian
Marital Status	:	Married

Declaration

I hereby declare that the details given above are true to the best of my knowledge and understanding.

Place: Chennai

Date: (Mohankumar S.)