

# Santhosh KN

Senior Software Engineer

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## Professional Summary:

- Currently working as a Senior Software Engineer at Informatica Business Solutions, having 6+ years of work experience in Software development (Python & Java), Backend web development, Chatbot development, Software architecture, AWS Cloud architecture, DevOps Automations, and Artificial Intelligence.
- Proficient in Python and excellent programming skills.
- Strong experience in AWS Cloud Automation and DevOps tools.
- Designed multiple low latency and highly scalable Software architectures and developed highly optimized Software applications, Chatbots and Data pipelines.
- In-depth understanding and experience with Machine Learning, Deep Learning, Natural language Processing (NLP), Time Series Forecasting, and Automatic Speech Recognition.
- Successfully Built the End to end Conversational AI Chatbots. And have complete understanding on Chatbots applications.
- Strong experience in developing efficient backend architectures and database design.
- Won multiple awards for the outstanding performance and the Innovations at work.
- Possess good problem-solving skills & high responsibility towards the work. Capable of quickly learning new technologies & apply them to the Projects.

## Technical Skills:

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| • <b>Programming Languages:</b> - Python, Java. (REST APIs, Micro-Services, Multithreading, etc.)   |
| • <b>Databases:</b> - MySQL, MongoDB, Redis, Memcached.   |
| • <b>Backend Tools &amp; Frameworks:</b> - Flask, Django, Apache, Tomcat, RabbitMQ.   |
| • <b>AI:</b> - Machine Learning, Deep Learning, Natural Language Processing, Time Series Analysis, and Speech Processing (ASR, STT, and TTS). |
| • <b>AI Tools &amp; Frameworks:</b> - Keras, Tensorflow, Scikit-learn, Spacy, Pandas, RASA, Kaldi, etc.                                       |
| • <b>Cloud:</b> - AWS, Azure, GCP.  |
| • <b>DevOps:</b> - Linux, Shell Scripting, Jenkins, Terraform, Docker, Kubernetes, Git, Jira, Selenium.                                       |

## Work Experience:

### Informatica Business Solutions (Mar-2021 to Present)

#### Senior Software Engineer

- **Project:** - "OpsBot"  
OpsBot is an Alert Remediator & Auto-Healing solution that aims to automate the entire Level-1 support in the Product operations lifecycle. This Bot monitors the alert queue and resolves the alerts by executing the predicted script in the destination server.

- Worked on designing the entire architecture of OpsBot, Developed NLP solutions, backend components and APIs using Python, Flask.
- Worked on ML data pipeline that fetches data, processes the data, and saves the data in the warehouse.
- Worked on NLP algorithms like Naïve Bayes, SVM, and Random forest for classification of Alerts.
- Worked on ALBERT to Extraction of Entities from the OpsGenie Alert's description.
- Worked on Deployment of our Product in Multi-Cloud platforms (AWS, Azure & GCP).
- Automated DevOps pipelines using Python, AWS-Boto3, Terraform, Jenkins and Chef.
- Developed Python applications that configures AWS Cloud Watch Alarm automatically,
- Developed Utility applications that provisions & manages multiple AWS resources like creating RDS instances & DB replicas, creating Loadbalancers & attaching instances to it, And utility to Creating, updating & manage CNames, Certs in ACM, Security Groups, etc.

## **Senseforth AI Research** (Feb-2020 to Feb-2021)

### **Senior Software Engineer**

- **Project: - "A.ware"**  
A.ware is an AI ChatBot building Platform that allows any organization to build their own domain-specific, multi-lingual chatbot for their business, and productionize the chatbot in very minimal efforts.
- Extensively worked on Building highly scalable, multi-lingual Chatbots.
- Worked on optimization of the Chatbot architecture by including Cache, Message brokers, and ElasticSearch.
- Actively worked on Chatbot's NLP to increasing the accuracy of Intent classification, Entity extraction, and prediction of future actions/conversational-flow.
- Worked with the latest NLP techniques like BERT, ULMFIT, etc.
- Worked on building the production-grade Speech Recognition system using Kaldi.
- Developed many APIs in Python (Flask), Java (JSP) for the Chatbot's workflow.

## **Gnani Innovations** (Aug-2019 to Feb-2020)

### **Machine Learning Engineer**

- **Project: - "Virtual Assistant Bot"**  
Virtual Assistant Bot is a Voice based chat bot that allows any organization to enable human-like customer interactions & support.
- Built many domain specific Chatbots using the RASA framework. And worked on the Integration of different Chatbots in a single platform.
- Worked on the Integration of BERT with RASA.
- Worked on the text normalization module for NLP using LSTMs.
- Developed transliteration application using the Attention model.
- Worked on Automatic Speech Recognition using Kaldi.

## **Mindtree** (Oct-2016 to Aug-2019)

### **Software Engineer**

- **Project: - "MWatch"**

MWatch is a monitoring tool that monitors most of the software infrastructures, logs & network components, and alerts the team on any abnormalities.

- Built an Anomaly detection application using LSTMs, which detect the unusual activity happening in the production servers.
- Created an Auto-issue-resolver application, which resolves the issues occur in production server. Resolution happens by predicting the type of the Issue occurred and pushing the respective scripts to the server.
- Developed a multi-user interactive server-client application which automatically logs a Ticket in Mindtree ticketing portal when a new email comes to the Outlook Inbox.
- Created a Java & Selenium based application which is used to automate any kind of webpage related task, by just providing appropriate xpaths in the Excel sheet.
- Designed Hyperic-Plugins in Java and Shell script to monitor the infrastructure components and to pull the required measurements from servers.
- Involved in Identifying, diagnosing, troubleshooting monitoring defects, and managing Hyperic agents and servers.

## Achievements:

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- Winner of the "**EUREKA**" award in Mindtree for the Exceptional performance and for bringing up innovations.
- Qualified as Finalist in **Mindtree Global Hackathon** for building "Intelligent Infra-Monitoring Solution".
- Winner of the **LFR (Autonomous Bot Competition)**, organized by **IEEE** SIT Tumkur.
- Winner of District Level **Chess** competitions and made 4th place in Inter-zone tournament.

## Areas of Interest:

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Software Development, Coding, Artificial Intelligence, DevOps, Quantum computing, Electronics, Mathematics, Physics, Poetry, Photography, and Chess.

## Education:

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- **Bachelor of Engineering** in Electronics & Communication. (June-2012 to Aug-2016)  
Siddaganga Institute of Technology, Tumkur. - **Final CGPA:** - 7.42  
Projects done: - Intelligent Home Navigation System for specially-abled.
- **Pre-University Collage.** (May-2011 to May-2012) - **Final Percentage:** - 72.54 %
- **SSLC / 10th Class.** (April-2009 to April-2010) - **Final Percentage:** - 79.56 %

## Personal Details:

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- **Phone Number:-** +91 9449910446
- **Date of Birth:-** 17-December-1994
- **Email id:-** Santhoosh.work@gmail.com
- **Linked in:-** <https://www.linkedin.com/in/santhoshkn1>

## Declaration:

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I hereby declare that all the information given above is true and correct to the best of my knowledge.

**Signature:** Santhosh KN