DIPESH KADARIYA

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•LinkedIn profile •Portfolio •GitHub link •HackerRank profile

PORFESSIONAL EXPERIENCE

StayWell Laboratories Inc., Los Angeles, California   Nov. 2019 – Feb. 2020
Chatbot Engineer
- Iteratively designed **conversational dialogue** trees for domain specific chatbots.
- Designed and implemented **scalable** and **robust conversational** system architectures using the **IBM Watson Assistant** platform.
- Exposed **REST API endpoints** supporting **cross-platform** (Apple and Android) availability of **chatbot interface**.
- Efficient user **session management** using **Redis** as in-memory database.

Kno.e.sis – Ohio Center of Excellence in Knowledge Enabled Computing, Dayton, Ohio   May 2017 – July 2019
Graduate Research Assistant
Project: kHealth - Semantic Multisensory Mobile Approach to Personalized Asthma Care
- Developed an **IoT-based** digital personalized **health monitoring system** to monitor the well-being of young asthma patients.
- Designed and implemented a **Python** based real-time data collection pipeline using **Firebase cloud database** to collect, integrate, and store **health data** from various **IoT devices** into an **Elasticsearch** database. Provided **REST API endpoints** to perform **CRUD** operation on data.
- **Curated** and **analyzed** patient's data using **statistical tools** and visualized the resulting data in frontend using **NodeJS, HTML5, CSS3** and **jQuery**.

EDUCATION

- **Wright State university**   Dayton, Ohio, USA
  Master of Science in Computer Science (Thesis) GPA: 3.88/4   August 2016 - August 2019
  Big and Smart Data Certified – July 2019

- **Visvesvaraya Technological University**   Bangalore, India
  Bachelor of Engineering - Information Science GPA: 3.21/4   August 2011 - August 2015

SKILL SET

- **Programming:** Python, Java, C, Object Oriented Programming, Data Structures and Algorithms
- **Application development Platforms:** Firebase, Google Dialogflow, IBM Watson Assistant, Amazon Lex
- **Web Development:** HTML5, CSS3, JavaScript, jQuery, Ajax, NodeJS, TypeScript, Angular, JSON
- **Database Management:** MySQL, SQLite, NoSQL (Elastic Search, MongoDB, Redis)
- **Software and Frameworks:** Flask, Bootstrap, Android Studio, Kibana, Jupyter Notebook, PyCharm, GitHub, Postman
- **Libraries:** Scikit-learn, NLTK, NumPy, pandas, matplotlib, plotly, Beautiful Soup, urllib, Socket.IO

PROJECTS

kBot: Knowledge Enabled Personalized Chatbot for Asthma Self-Management (Master's Thesis)
- Architected and developed **text** and **voice** based chatbot application using **Python-Flask** in the backend, custom **Android chat application** in the front-end, and **Elasticsearch** as cloud database.
- Defined a custom layer of **microservices (RESTful Web Services)** using **Flask** to address the functional need of the chatbot.
- Developed **serverless cloud functions** using **NodeJS** to process and articulate data to and from the **DialogFlow** agent.
- Designed and developed **Automated Notification System** using **Firebase Cloud Messaging** for environmental and medical alert.
- **Publication:** "kBot: Knowledge-enabled Personalized Chatbot for Asthma Self-Management." 2019 IEEE International Conference on Smart Computing (SMARTCOMP). IEEE, 2019.

D-record: Disaster Response and Relief Coordination Pipeline
- Designed and developed a web-based tool using **Python Flask** to provide **situational awareness** to support both individuals and community responders in **relief coordination** during the natural disaster.
- Designed and developed **responsive** web **UI** to **visualize** the processed data in a map view using **JavaScript, Ajax, jinja2, CSS bootstrap,** and **Mapbox API**.

Attentiveness Assessment Models
- Extracted **statistical** and **signal-based features** from **physiological data** collected using **active wearable sensors** for different user activities.
- Designed and trained Machine learning models (**SVM, K-Nearest Neighbor, Neural Network, Logistic Regression**) using **Scikit-learn** to assess the **attentiveness** of users based on their activity level.