Dipesh Kadariya

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Education

- **Wright State University** — Dayton, OH, USA
  Master of Science in Computer Science; GPA: 3.87 — *Aug. 2016 – Aug 2019*
  Big and Smart data certified
- **Visvesvaraya Technological University** — Banglore, India
  Bachelor of Engineering in Information Science; GPA: 3.25 — *Aug. 2011 – July. 2015*

Skills Set

Languages: Python, Java, C, JavaScript
Web Development: HTML, CSS, jQuery, Ajax, NodeJS
Database: MySQL, ElasticSearch (NoSQL)
Machine Learning Tools: Scikit-learn, TensorFlow, Weka
Semantic technologies: RDFS, OWL, protege, SPARQL
Frameworks: Flask, Bootstrap, Android
IDEs: Eclipse, PyCharm, Android Studio, Visual Studio Code
Version control: GitHub

Project and Experience

- **kBot: Knowledge Enabled Chatbot for Asthma Self-Management (Masters Thesis)**
  - **Description:** An Intelligent conversational agent offering voice and text based interaction with pediatric asthma patients; primary focused on collecting patient's health and environmental data and help them self-manage their asthma through contextual and personalized processing of these data.
  - **Position: Graduate Research Assistant (Jan 2018 - August 2019)**
    The Ohio Center of Excellence in Knowledge Enabled Computing (Kno.e.sis Center)
    Department of Computer Science and Engineering, Wright State University, OH, USA
  - **Publication:** Dipesh Kadariya, Revathy Venkataramanan, Hong Yung Yip, Maninder Kalra, Thirunarayan Krishnaprasad, Amit Sheth. "kBot: Knowledge-enabled Personalized Chatbot for Asthma Self-Management". In Proceedings of the IEEE SMARTSYS Workshop on Smart Service Systems (SMARTCOMP 2019). IEEE, 2019.
  - **Backend:** Python (Flask as web framework), Elasticsearch (data store), web sockets, RESTful web Services, Dialog Flow (Dialog management), Firebase cloud function, 3rd party weather APIs for environmental data
    Frontend platform: Android (Custom chat application)
- **D-record: Disaster Response and Relief Coordination Pipeline** — Kno.e.sis research center
  - **Description:** A tool to process social media data and crowd source data, including imagery (such as satellite data) to provide situational awareness to support both individuals and community responders in relief coordination during natural disasters.
  - **Role:** Development of frontend web interface to interact with the backend server and visualize the processed data in a map provided by Mapbox.
  - **Technology Used:** HTML, CSS, JavaScript, jQuery, Ajax, Mapbox, Data plot, Data visualization
- **ReacTRack- Depression Project** — Kno.e.sis research center
  - **Description:** An intelligent conversational agent aiming to understand the personalized effects of prescribed antidepressant medications, specifically mental health changes, symptoms or potential ADRs through monitoring patient mood changes over the duration of the medication cycle.
  - **Backend:** JavaScript, mongoDB, DialogFlow **Frontend platform:** Facebook Messenger
- **kHealth-Asthma** — Kno.e.sis research center
  - **Description** We developed an IoT-based digital personalized health monitoring system to monitor the well-being of young asthma patients in real-time. The system is composed of sensor nodes and an android application which acts as an IoT gateway. This system is used to collect patient-generated health data, analyze and get actionable insights from it.
  - **Technologies:** Android (front end application), Python, JavaScript, NodeJS, SQL, ElasticSearch, Firebase, Flask, Data analysis, Machine learning, Data Visualization, Cloud storage, Data encryption, Data privacy.
- **Attentiveness Assessment Models**
  - **Description** This study investigated the feasibility of using wearable sensors to estimate the attentiveness levels of participants. A set of features were extracted from the data collected using active wearable sensors for three different user activities. Machine learning models were trained on these features to assess the attentiveness of users based on their activity level.
  - **ML models used:** SVM, K-Nearest Neighbor, Neural Network, Logistic Regression