Shekhar Bhattacharya

Fullstack developer

A computer science enthusiast with a zest for technological innovations

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EXPERIENCE

Research Assistant (HiWi)
Technical University of Kaiserslautern

09/2019 - Present   *Kaiserslautern, DE*
Area of responsibility
- Agile development of an **ontology management platform.**
- Creating a **knowledge base** for smart data.
- Developing an **interactive UI** to create / manage Ontologies.

Contact: Prof. Dr. Christoph Grimm - Grimm@cs.uni-kl.de

Fullstack Developer (HiWi)
InnoCow GmbH

06/2018 - 07/2019   *Kiserslautern, DE*
Area of responsibility
- Development of a **health / position tracking platform.**
- Creating a **middleware** to fetch / translate / provide live data.
- Designing an **User Interface** to track health / position of herd.

Contact: Mr. Sebastian Baumbach - baumbach@innocow.de

Full stack developer
Algoworks Technologies

01/2017 - 09/2017   *Noida, IN*
Area of responsibility
- Creating **backend middleware** for social media / financing applications.
- Developing / integration of **automation testing platform.**
- Creating **news feed algorithms.**

Contact: Sanjukta Biswas - biswas@algoworks.com

Software developer
Magic EdTech

06/2016 - 01/2017   *Noida, IN*
Area of responsibility
- Development of JavaScript based **browser oriented games.**
- Creating an **automation platform for HTML to / from PDF translation.**
- Development of an **epub compatible platform.**

EDUCATION

M.Sc in Applied Computer Science
Technical University of Kaiserslautern

10/2018 - Present

B. Tech in Computer Science
Dr. APJ Abdul Kalam University

03/2012 - 05/2016

PROFESSIONAL SKILLS

Agile Development   Client Management

Leadership and Communication

Time Management   Domain Specific Modeling

Business process automation

Reverse engineering   Backtracking

TECHNICAL SKILLS

Frontend Technologies
- **Javascript, ReactJS, React Native, Redux, Material-UI, HTML, CSS**

Backend Techologies
- **NodeJS, Express, MongoDB, ArangoDB, Firestore**

Deployment
- **Netlify, Heroku, CI / CD, Docker, Kubernetes**

Operating systems
- **Mac, Linux, Windows**

IDEs
- **VS Code, Atom, IntelliJ IDEA**

LANGUAGES

English
 Fluent

German
 Basic knowledge

Hindi
 Mother tongue

INTERESTS

Biking   Reading   Music   Adventure

Photography

PROJECTS

Master Thesis - Agile development of an interactive Ontology Management Platform
- A **state-of-the-art** platform for automotive experts to **elicit system and design requirements** as **ontologies** based on OWL standards which allows users, with no prior knowledge of ontologies, to create/manage/relate ontologies and **create smart data**.
- Consists of a knowledge base to contain linked data using **ArangoDB** which is served using a middleware service written in **NodeJS/Java**.
- An interactive User Interface that allows users to create ontologies and relationships among different elements with ease. Written in **ReactJS**, the user interface uses **Redux** to maintain the application state and connect to the backend middleware in order to fetch data.

Shine - Social Media Web/Mobile Application
- A **social media platform** that allows users to create/share posts containing text/media. The backend middleware is developed using **NodeJS** that connects to a **MongoDB** instance in order to store data.
- Using SocketIO, different users can **chat** with each other and **create groups** in which users can share other posts.
- **Authentication system** of the application, built using **PassportJS** allows users to create accounts using other social media accounts like Facebook, Instagram, Google etc. A session is then added for a specific user in the database.
- Organisations can also join the application and create **paid promotional posts** for specific **targeted audiences**. The algorithm running at the backend chooses the best suited users for the promotion according to the provided specifications.
- **Parental control** is also available in the application and is made possible by linking multiple children accounts to one parent account. Parent account is able to control/customize the news feed for child accounts.

Quax - Financing/Accounting application
- An accounting application that allows users to find the **nearest available accountants** and purchase the services offered by them in order to **perform financial activities**.
- Accountants can create their schedule of availability and can create the list of services being provided by them with the pricing per hour.
- The backend middleware written in **NodeJS** connects to the **MongoDb** database in order to find the nearest available accountant using **location queries** and time specific filtering.
- Users can book different slots of the accountant's available time and can negotiate the pricing for services being offered.
- **Fine/Credit system** keeps track of the negligence by the accountants/users.

WeekEnd - Social Media application to create/find events and posts.
- A web application that allows users to **find/create events based on location, type and time** and later **share memories** of the event as media posts once the event has been attended.
- The user interface, programmed using ReactJS and Redux, talks to the backend middleware written in **NodeJS** in order to create the events. **Firestore** is used to store information about the application.
- Users can chat with the organiser of an event and later with all the attendees using **Firestore real time database.**
- This web application is designed as a **Progressive Web Application(PWA)** in order to be used as a mobile application.

LegoBot - A controllable robotic arm that creates Lego structures
- A Mobile application created in **React Native** sends movement information to the backend middleware.
- The backend middleware, programmed in **NodeJS**, further talks to an **MQTT service** that translates this information to the machine readable format.
- Upon this translation, the robotic arm executes the MQTT command.

For more, visit *github.com/shekhars-realm*

Shekhar Bhattacharya, 02.10.2020