

# Prerna Rao V

Software Engineering Specialist, GE Healthcare, Bangalore

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## EDUCATION

### PES University, Bangalore

B.Tech in Computer Science and Engineering | Specialization in Algorithms & Computing Models

CGPA: 8.41/10 (3.58/4) | 🏆 Prof. CNR Rao Scholarship

Aug 2016 - May 2020

### Centre for Innovation & Entrepreneurship, PES University

Level 1 - Getting Started With Entrepreneurship

Aug 2018 - Dec 2018

## WORK EXPERIENCE

### GE Healthcare, Bangalore, India

Software Engineering Specialist

Domain: Clinical Imaging, Application Development

Description: Web and mobile application to view and manipulate clinical images through a UI.

Sep 2020 - Present

### GE Healthcare, Bangalore, India

Software Engineering Intern

Domain: Web/Mobile App Development

Description: Internal web applications to access and manage customer and installed base data.

Jan - Aug 2020

## PROJECTS

### 1. AryaBota: Gradual and Gamified Environment to Learn Programming

Jun 2021 - Present

Mentors: Dr. Viraj Kumar (IISc), Prof. N S Kumar (PESU)

Technologies: Python, ReactJS, Flask

Website: <https://aryabota.vercel.app/>

- > Developed a visual tool to introduce programming concepts to children.
- > Proposed a gamified UI/UX and a domain-specific language with simplified syntax.
- > Designed the language to gradually progress to Python by teaching concepts via levels in the game.
- > Currently evaluating the usability of this tool through workshops for students between grades 6-10.
- > A research paper comprising our initial findings is currently **under submission**.

### 2. Universal Viewer - Zero Footprint

Sep 2020 - Present

Organization: GE Healthcare, Mentors: Arjun Reddy, Mohit Kumar

Technologies: Java, JavaScript/TypeScript, KnockoutJS, SpringBoot, Unit Testing, Kubernetes

- > Ported configuration API implementation from .NET to Java to aid containerization.
- > Implemented Audit Logging as per IHE requirements.
- > Enhanced user experience of translations, transformations, and annotations.
- > Fixed over 50 bugs, defects, and customer-raised issues.

### 3. Installed Base Repository - Data Management Application

Jun - Aug 2020

Organization: GE Healthcare, Mentor: Amar Patil

Technologies: Java, SpringBoot, Predix PolymerJS, ES6, Docker

- > Web-based application to monitor and update the installed-base data for GEHC.
- > Implemented Java APIs for CRUD operations from file-system.
- > Wrote docker scripts to deploy the application.
- > Participated in V&V cycle and worked on fixing defects and bugs during the same.

### 4. Unified Customer Master - Know Your Customer

Jan - May 2020

Organization: GE Healthcare, Mentor: Amar Patil

Technologies: ReactJS, Node.js, ES6, AWS

- > Developed a React based bolt-on UI to improve customer data management at GE Healthcare.
- > Owned and executed development of workflows within the application, built 9 reusable UI components, and fixed various defects and bugs during testing.
- > Part of the team responsible for releasing MVP-1.
- > Conducted a demo/knowledge-transfer session of the codebase to the new team.

## 5. Sketch2HTML: Image Recognition based HTML Generator

Jan - Jun 2020

*Institution:* PES University, *Mentor:* Prof. Vidhu Rojit

*Technologies:* HTML, Machine Learning, Flask, OpenCV, Selenium Web Driver

- › Developed a web application to convert hand-drawn wireframes into usable HTML webpages.
- › Created the UI for the application using HTML5, CSS, and Bootstrap.
- › Used the basics of wireframing, machine learning, and image processing to parse and process our input.
- › Built a Support Vector Machine (SVM) model to classify different HTML elements.
- › Implemented unit-testing for the UI of the application using Selenium Web Driver.
- › Created a ~90 page report ([link](#)) for design, requirements, research, and implementation of Sketch2HTML.

## VOLUNTEER EXPERIENCE

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### 1. Project Sitara

#### › Math & English Tutor for class 6-10

Jan - Apr 2019

- Created lesson plans and conducted lessons for students in class 10.

#### › Foundational English Curriculum Design and Tutoring

Sep - Nov 2020

- Helped design, and co-taught, a personalised curriculum aimed at bridging gaps in foundational English - both spoken and written - for middle and high school students.

#### › R&D for Measuring Impact on 21st Century Skills

May 2021

- Conducted research on the impact of current pedagogical practices on students' 21st Century Skills. Worked on designing and testing a learning structure that incorporated critical 21C skills for learners, and methods for the educator to evaluate them.

#### › Math Teacher-Instruction-Kits (TIKs) for Visually Impaired Students

May - Sep 2021

- Developed [Teacher-Instruction-Kits](#), in collaboration with Vision Empower, for visually impaired students (CBSE Class 8 Math), to make education more accessible to them.
- These are manuals to assist teachers in delivering complex visual concepts through thought-experiments and tactile activities.

#### › Curriculum Research Mentor to Undergraduate Students - Team Lead

June - July 2021

- Mentored a team of volunteers in an effort to research and create a curriculum to be delivered via a localised Science [EdTech series on YouTube](#).
- This was done in wake of the Covid-19 pandemic to provide accessible, affordable education to students who lost access to formal education due to the lockdowns.

#### › STEM Teacher-Instruction-Kits (TIKs) for Visually Impaired Students - Team Lead

Sep 2021 - Present

- Currently leading a team of volunteers, in collaboration with Vision Empower, in an effort to develop [Teacher-Instruction-Kits](#) for visually impaired students (CBSE Class 9 Math and Science), to make education more accessible to them.

### 2. Desire Society

Nov 2014 - May 2016

- › Tutoring children between ages 4-17 in Math, Science & English.
- › Planning and conducting weekly extra-curricular activities to increase engagement and interaction among the children.

## RELEVANT SKILLS

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|--------------------------------|---|
| › <b>Programming Languages</b> | Java, Javascript/ES6, Typescript, HTML5, CSS, Python                |
| › <b>Frameworks</b>            | ReactJS, KnockoutJS, NodeJS, Flask                                  |
| › <b>Databases</b>             | MySQL, PostgreSQL, Neo4j  |
| › <b>Tools</b>                 | Figma, Google Jamboard, AdobeXD                                     |
| › <b>Other</b>                 | Agile/Scrum Methodologies, RESTful Services, Material UI, Git, Helm |

## RELEVANT COURSES

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Web Technologies + Practicum • Research Methodologies • Software Engineering • Social Network Analytics • Natural Language Processing • Knowledge Management • Data Structures & Algorithms + Practicum • Principles of Programming Languages • Compiler Design • Advanced Database Management Systems • Object Oriented Modelling and Design • Cloud Computing • Introduction to Data Science • Linear Algebra