Pavlov Patient Database

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Recommended Citation
Brown, Dylan; Jones, Bryce; Palmer, Abby; Parker, Kenyona; and Harris, Deven, "Pavlov Patient Database" (2020). Symposium on Undergraduate Research and Creative Expression (SOURCE). 853. https://scholar.valpo.edu/cus/853

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Abstract

- This project is implementing and deploying a functional patient database with customizable treatment plans and progress notes for Choices!, a counseling service center.
- To build this application and support the various requirements, several frameworks were considered for this project including Django, Flask, and Ruby on Rails.
- Existing libraries within Rails allow for a choice of several database engines; MySQL, Postgresql, MongoDB, and NoSQL were considered. MySQL was adopted as a result of the extensive documentation and for continuity with the previous solution. The Ruby on Rails suite was selected for reasons of existing familiarity for the team.
- Front-end requirements were met with a combination of HTML and Javascript, linked to a Bootstrap 5 framework in order to streamline user accessibility.
- A key quality desired by the customer was ease-of-use, to encourage higher efficiency and easy adoption by the stakeholders.
- In the process of development, secure data handling also emerged as a further and highly-desired attribute.

Platforms and Tools

- Ruby on Rails (with MySQL database)
- JavaScript
- HTML 5
- Bootstrap 5

Platforms and Tools Diagram

USE CASE DIAGRAM

- View Patients
- Create Patients
- View Treatment Plans
- Create Treatment Plans
- Administrator
- Therapist

Additional Features

- Created google forms that are able to be uploaded for treatment plans
- Login in screen with password

Challenges

- System was built to be a potential successor to a currently deployed solution, but source code and design/specifications were unavailable
- Circumstances including the COVID-19 situation required rapid changes to team practices due to dispersal of team and move to network-based communications
- Some features required significantly more complexity and customization capability than originally anticipated; individual treatment plan templates in particular required architectural changes

Future Work

- Added ability to create progress notes based on information previously recorded in the creation of patients and treatment plans
- Implementing the real data from the counseling database into the system to be used
- Authorizing access to real users in the counseling staff
- Added security in accessing data for both viewing and manipulating for patient confidentiality

Acknowledgements

- Professor Paula Dranger, MSW, LCSW, MAC
- Professor Nick Rosasco, DSc