David Beck

Software Engineer

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Education

Colorado School of Mines – B.S in Computer Science 08/2019 - 08/2023
Colorado School of Mines – Division II Football

Skills

Languages: Python, C++, C, Java, JavaScript, TypeScript, HTML, SQL, CSS, PHP, Bash, MIPS, OCaml
Tools & frameworks: React, Jquery, Bootstrap, AJAX, Apache, Express, Node, REST, Django, JUnit, Git Bitbucket
Databases / DataScience: MySQL, MongoDB, Pandas, Matplotlib, NumPy, Python Machine Learning
Other: Agile methodology, OOPL, Front end, Back end, Hardware simulation, Algorithms, Unit testing
Soft Skills: Team Oriented, Leader, Flexible, Self-Motivated, Interpersonal Skills, Software Design,

Experience

Full-Stack Engineer Intern, Burst IQ & RemediChain- Englewood, CO 05/2022- 08/2022

- Enhanced Pharmacists previous system, connecting cancer patients with unused chemotherapy medications by transitioning data from a simple spreadsheet to a secure blockchain-based system for data organization and security.
- Utilized BurstIQ's private permissioned blockchain to store and manage sensitive data assets representing medications and requests.
- Developed functionalities for different user roles, including Pharmacists (viewing, accepting/denying donations, assigning medications) and Admins(dashboard management).
- Interacted with blockchain assets through REST API calls, focusing on medication statuses and ownership.
- Conducted unit, user interface, and integration testing, ensuring functionality and user-friendly design.
- Increased pharmacist workflow efficiency by successfully implementing features like transfer of assets, status change functions for medications, and an easy to use interface
- Demonstrated exemplary leadership by managing a team following AGILE methodologies, hosting scrum meetings as scrum leader.
- Engaged with key stakeholders from RemediChain, presented a developed solution, actively soliciting feedback to align with requirements and expectations.
- Gained valuable experience in web API development, understanding HTTP communication, Webhooks and security considerations in web development.
- Contributed to a significant healthcare initiative, leveraging blockchain for better medication management and patient care.

Links: LiveDemo GitHubRepo WriteUP

Tools Used:

- **Technologies:** HTML, CSS(Bootstrap), JavaScript, BurstIQ API, BurstChain
- **Testing:** VS Code Live Server , Postman/Insomnia, Chrome Developer tools
- **Communication and Organization:** Slack, ClickUp, Figma

Projects

CPU Scheduling Simulator, C++

- Developed a CPU scheduling simulator to implement various Scheduling algorithms: **FCFS**, **SPN**, **RR**, **PRIORITY**, and **MLFQ**.
- Dealt with large codebase, gaining proficiency in modern **C++** principles, and working with existing code.
- Managed a simulation with single CPU, multiple I/O devices, kernel-level threads, and five task states.
- Utilized next-event simulation model with event queue to manage state transitions.
- Read scheduling scenarios from a simulation file and Provided structured output with options for metrics, per-thread details, and verbose information

Course Work

Colorado School of Mines, Undergraduate- Golden, CO 08/2019 - 08/202

- **Software Engineering Courses:**
  Operating Systems (C++, C), **WebApplications**(HTML, CSS, Javascript, React, Node, MongoDB), **Web Programming** (LAMP- Linux, Apache, MySQL, PHP), **Machine Learning**(Python) **Programming Languages**(OCaml, Python) **Data Structures**(C++) **Algorithms** (C++, Python) **Software engineering** (Java) **Information Security & Privacy** (Linux) **Game Development(** C++, Unity, Gamemaker Studio2) **Advanced Software engineering** (Full stack development) **Database Management** (SQL)
- **Math and Applicable Science:**
  Calculus for Engineers 1, **Calculus for Engineers 2**, **Calculus for Engineers 3**, **Differential Equations**, **Linear algebra**, **Engineering Physics 1(**Mechanics), **Engineering Physics 2**(ELECTROMGT,OPTC)