Sebastian Oberg

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Education

Texas A&M University | College Station, TX Expected Graduation: Fall 2024
B.S. - Computer Science, Minors in Cybersecurity & Statistics *GPA: 3.2*
Relevant Coursework: Data Structures & Algorithms, Database Systems, Computer & Network Security, Reverse Software Engineering, Operating Systems, Linear Regression Models, Computer Architecture, Cloud Computing
Clubs and Organizations: Aggie Competitive Programming Club, Texas A&M Cybersecurity Club, Aggieland Mariachi

Skills

Technical Skills: Python, Java, C/C++, R, SQL, HTML, CSS, JavaScript, TypeScript, Swift, React, Next.js, Ruby, Ruby on Rails, Object-Oriented Programming, Predictive Modeling, Data Visualization
Tools & Technologies: Linux/UNIX Shell, Agile CI/CD Practices, Jira, SQL Databases, Web & Application Security, Reverse Engineering, Capture the Flag (CTF) Competitions, Cloud Platforms (Amazon AWS, Microsoft Azure, OpenStack)

Work Experience

Texas A&M University Health Care Center College Station, TX
Software Engineering Intern *June 2024 - August 2024*
- Collaborated with interdisciplinary teams to develop Olivia-KIDS.org, an interactive website for early childhood education
- Cooperated with a user experience specialist to convert 20+ wireframes into mobile responsive frontend components
- Converted nurse-designed curriculums into web-ready format using Typescript, React, and Next.js, therby improving engagement with young mothers

TeamUp (Nonprofit) College Station, TX
Web Developer *May 2024 - August 2024*
- Created detailed design prototypes in Figma, ensuring a cohesive and visually appealing user interface
- Implemented secure input validation practices to protect against common web vulnerabilities and enhance website security
- Redesigned and completely reimplemented the frontend application using Ruby on Rails, enhancing user experience by 25%

Midronome Aarhus, Denmark
Application Security Intern *April 2023 - June 2023*
- Collaborated with startup's founder and engaged with customers in forums to gather feedback, driving the implementation of desired changes and bug fixes
- Developed a Windows client GUI for the Sync File Generator with JavaFX, enabling user customization of BPM, time signature, bar count, and delay adjustments
- Engaged in vulnerability assessments and penetration testing on the Sync File Generator, identifying and rectifying exploits to enhance the software's security and robustness

Projects & Research

UMI *March 2024 - May 2024*
- Developed an iOS app and a matchmaking algorithm to enhance client-stylist compatibility
- Integrated frontend with backend services, incorporating robust error checks and security measures to maintain data integrity and protect user information
- Designed and implemented a user-friendly frontend in Swift, ensuring an intuitive interface and seamless user experience, therefore improving user retention and satisfaction by 20%

Spatiotemporal Analysis of Diabetes Incidence *January 2024 - May 2024*
- Investigated the relationship between walkability and diabetes prevalence in the U.S. using Geographically Weighted Regression (GWR), Monte Carlo simulations, Global I Moran's Test, and Variance Inflation Ratio (VIR)
- Developed a revised walkability index model incorporating additional CDC variables, challenging the current walkability metrics and revealing significant regional anomalies
- Presented findings through advanced data visualizations in R, enhancing the understanding of spatial and demographic influences on diabetes patterns

The Alley POS System *September 2023 - October 2023*
- Developed a Point-of-Sale (POS) application facilitating sales analytics, item management, and inventory tracking, leading to increased efficiency for cashiers and managers
- Leveraged Java and JavaFX with FXML to build a responsive and intuitive user interface
- Designed and managed a PostgreSQL database system to support complex data analysis in order to predict the sales and inventory needs with an accuracy of 90%

Website Content Scraper *August 2023 - September 2023*
- Engineered a Visual C++ web client to crawl and parse URLs, leveraging efficient algorithms for real-time server/page statistics display and error detection, enhancing data analysis reliability and error reporting accuracy by 15%
- Enabled comprehensive page retrieval with HTTP 1.0, through dynamic buffer expansion and detailed error messaging, improving web scraping reliability and user experience
- Ensured client resilience against internet anomalies by focusing on secure coding to prevent deadlocks and buffer overflows, improving security and stability by 10%