DAVID ROHWEDER

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PROFESSIONAL EXPERIENCE

PENN STATE UNIVERSITY, UNIVERSITY PARK, PA, JANUARY 2023 TO MAY 2023
TEACHING ASSISTANT – MOBILE APPLICATIONS COURSE

- Cultivated valuable proficiency in code debugging and effectively troubleshooting errors to help students achieve their personal and course goals.
- Taught topics including shapes, gestures, persistence, maps and location, DispatchQueue, concurrency, core data, UIKit, fetchRequest, and navigation.
- Communicated with students via virtual channels — including email, Slack, and Zoom — to troubleshoot technical issues and provide needed assistance.

ROSENBERGER NORTH AMERICA, AKRON, PA, MAY 2019 TO AUGUST 2022
INTERN

- Aligned objectives and bridged communications with cross-departmental collaborators to integrate Azure and ERP systems with production workflows, speeding up production 4x.
- Piloted the creation of custom scripts and orchestrated manage engine server deployments to enhanced SysAdmin automation by 80%.
- As a member of the Disaster Recovery team, supported multi-site vSphere environment management to strengthen business continuity.

EXPEDITIONARY INTEREST GROUP, LEESPORT, PA, SEPTEMBER 2018 TO DECEMBER 2020
SOFTWARE DEVELOPER

- Acted as the lead architect for the copyrighted Penny Helper software utilized by several nonprofits.
    - Developed and implemented an installer that would periodically check the servers for newer releases of the software and install the latest version if an update was detected.
- Mined ETH and XMR utilizing constituents' idle computer time to grow revenue by 30% in V3.5.
- Introduced Agile methodologies and reported regular updates to current users, shortening release turnaround time by 40%.

PROJECT EXPERIENCE

APRIL 2023 TO PRESENT
INCLUSISCORE – HACKPSU

- Leverage Firebase to engineer the backend for InclusiScore and achieve a 96% credit score prediction accuracy.
- Avoid overfitting by training and validating the datasets in an 80/20 split utilizing the sklearn linear regression model.
- Coordinate with the frontend team to exchange optimal user documents and back end-stored data.

Tools: Python (scikit-learn, Pandas), Firebase, React

AUGUST 2022 TO PRESENT
SOLARLENZ

- Engineer and publish an interactive Augmented Reality application about the solar system in the App Store.
- Allow the user to maneuver their camera and observe a 3D-selected planet utilizing a responsive AR.
- Implement speech recognition to allow users to utilize specific commands on planets and hit testing in AR to select planets.

Tools: SwiftUI (SceneKit, ARKit, UIKit, AVFoundation, Speech), Objective-C

JANUARY 2022 TO MAY 2022
PARALLEL PROGRAMMING RESEARCH PROJECT
- Guided a team project aiming to explore Dijkstra's and Bellman-Ford algorithm parallelization techniques.
- Produced a complete Dijkstra solution incorporating a graph data structure, data generator, tests, and performance tests.
- Utilized the PSU Roar Supercomputer to calculate 20,000 x 20,000 matrix with 8X and 10X speedup, respectively, for 20 cores.

Tools: C++ (OpenMP), Shell, PBS

JANUARY 2022 TO MAY 2022
NITTANYMARKET
- Advanced development of a robust e-Commerce platform featuring a Jinja-powered front end and Flask-based RESTful APIs that allowed sellers to post products, buyers to purchase products from sellers, and other features.
- Included the ability for buyers and sellers to create an account, change their password, and request seller access in an easy, effective manner.

Tools: Python (Flask, Blueprints), SQLite, HTML, CSS, JavaScript

AUGUST 2021 TO DECEMBER 2021
LINUX FILE SYSTEM DRIVER
- Built a file system driver that, on a local server, bridged communications between the simulator and the disk controller.
- Built a file system driver that bridged communications between the simulator and a disk controller on a local server
- Duplicated the functionalities of an operating system by implementing open/close, read/write, seek, and file creation/maintenance features.
- Implemented an LRU cache for 80% average hit ratio while using diverse workloads for validation

Tools: C Network Programming

EDUCATION AND CREDENTIALS

BACHELOR OF SCIENCE (B.SC.) IN COMPUTER SCIENCE

Pennsylvania State University, University Park, PA
Dean's List, 6 out of 8 semesters
GPA: 3.46
Awarded the Penn State Undergraduate Scholarship for Talented Students

TECHNICAL PROFICIENCIES

- **Languages**: C/C++, Swift (obj-c), JavaScript, Java, Python, SQL (MySQL, MongoDB, SQLite), R, .NET, Verilog
- **Frameworks and Libraries**: React, Node.js, NumPY, Flask, OpenMP, Open MPI, TensorFlow, Pandas, scikit-learn
- **Styles & Methodologies**: Agile, OOP, MVVM, MVC, Functional, Procedural, SDLC
- **Developer Tools**: Git, Amazon Web Services (AWS), Docker, VS Code, Xcode, Visual Studio, Firebase, PyCharm
- **Operating Systems**: Linux Server, iOS, macOS, Windows Server 2019