

# VIBHOR AGARWAL

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## EDUCATION

**Pennsylvania State University - University Park**

*Master's, Computer Science*

**August 2024 - May 2026**

*GPA: 3.80*

**Pennsylvania State University - University Park**

*Bachelor's, Computer Science*

**August 2017 - May 2021**

*GPA: 3.81*

*Minor: Mathematics*

**Relevant Coursework: Data Structures & Algorithms, Theory of Computations, Operating Systems, Computer Vision, DBMS**

## PROFESSIONAL EXPERIENCE

**The Pennsylvania State University**

*Graduate Teaching Assistant*

**State College, PA, USA**

*January 2025 - Present*

- Instructed and assisted students in CMPSC 132, covering advanced topics in object-oriented programming, recursion, data structures, and algorithms.
- Collaborated with faculty to enhance the course curriculum and introduce real-world applications of data structures for better engagement.
- Led office hours and mentoring sessions, providing in-depth guidance on Python programming, algorithm design, and problem-solving techniques

**SE Aircon**

*Software Developer*

**Noida**

*March 2023 - August 2024*

- Drove a **30% surge in inquiries** with a React-driven redesign and deployment of the company's website.
- Streamlined billing and financial tracking by efficiently integrating Tally ERP, enhancing operational efficiency and data accuracy.
- Strategically implemented data management for stock, projects, and clients, dramatically improving operational efficiency and clarity.

**Redfin**

*Software Developer*

**Seattle, WA, USA**

*February 2022 - December 2022*

- Developed a dialog for **collaborative search**, resulting in **76% increase in registrations and shared searches**.
- Built Save Search Nudge feature that compelled users to register, which **increased saved searches by 13%**.
- Implemented and managed **visually intuitive panels and dashboards to monitor key features and logins** at Redfin website, resulting in enhanced performance and improved user experience.
- Improve accessibility across Redfin's website, ensuring **full compliance with WCAG standards**.
- Ensured 24/7 function availability by proactively identifying and resolving critical issues related to **daily release, login issues, and questions from outside teams during on-call rotations**.

**KCF Technologies**

*Quality Assurance Engineer*

**State College, PA, USA**

*September 2021 - February 2022*

- Conducted a range of tests to support KCF's comprehensive machine health web application.
- Ensured software quality through Regression Testing, identifying and reporting discrepancies prior to releases.
- Created effective manual test plans, identifying hundreds of bugs through **API, integration, and automated testing**.

**Cavisson System**

*Software Engineering Intern*

**Noida**

*June 2019 - August 2019*

- Optimized processing time for client websites using **OpenCV** providing efficient solutions to the end user.
- Programmed dynamic GUI using Java to make functioning more operative and created automated solutions.

## PROJECTS

**ChewRate**

*November 2024 - Present*

- Developing motion-based food intake tracking using gyroscope and accelerometer data.
- Implementing signal processing techniques to classify chewing patterns and bite detection.
- Exploring applications in mindful eating, healthcare, and human activity recognition.

**E-Commerce Application**

- Built a website using MERN Stack which helped users to sell their products online in a timely fashion.
- Executed an additional security layer governed by custom Middlewares and express routers for user authentication.

**Dynamic Storage Allocator**

- Developed a dynamic storage allocator with functionality to free and realloc memory using a segregated free list.
- Implemented a heap consistency checker as a debugging tool to check for multiple in variants and block corruptions.

## SKILLS

**Skills:** JavaScript, C/C++, Git, HTML/CSS, Java, React.js, SQL, Python, Node.js, Grafana, JIRA, Microsoft Azure