

Mantavya Mahajan

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EDUCATION

The Pennsylvania State University

University Park, PA

B.S.: Computer Science, Mathematics

Minor: Business Fundamentals

Graduation: December 2025

Relevant Courses: Discreet Math, Probability, Data Structure and Algorithms, OOPS

GPA: 3.60/4.00

Digital Design, Computer Architecture, System Design, Database Systems, Dean's List (Fall/Spring 2022/2023) semesters

Finance, Supply Chains, Marketing, International Business Operations, Business Analysis

Technical Skills

Programming languages: Python, C, Java, C#, R, MATLAB, TypeScript, Angular

Web Development: HTML, CSS, React, JavaScript, Node JS, PHP, Django, Vue JS, Tailwind CSS

Databases: MySQL, Derby Database, Firebase, PostgreSQL, MongoDB

Tools: Git/GitHub, Linux, Excel, Microsoft Office, Power BI

Machine Learning: TensorFlow, Keras, Scikit-learn, Pandas, NumPy, PyTorch

Other Skills: Statistics, Data Analysis, Agile, SQL, Docker, API, UI-UX Design

Professional Experience

Software Engineering Intern

Delhi, India

Alchem International

May 2024 – Aug 2024

- Developed and maintained web applications using HTML, CSS, JavaScript, Bootstrap, jQuery, and PHP, implementing new features and optimizing code, resulting in a 30% increase in site performance and reliability.
- Collaborated with cross-functional teams, conducted code reviews, and participated in daily stand-ups, achieving a 25% reduction in bugs and a 40% improvement in project delivery times while enhancing SEO strategies that increased website traffic by 20%.
- Used Git for version control, and JIRA for project management, and managed MySQL databases to ensure data integrity.

Full Stack Developer

Remote

M8

Aug 2024 – May 2025

- Developed scalable social networking platform using Socket.IO, Redux, and MongoDB, serving 5000+ users with integrated AWS services for media management and notifications.
- Built secure RESTful APIs with Node/Express implementing JWT authentication and CI/CD pipeline for automated testing, monitoring, integration, and continuous deployment workflow management.
- Optimized React/Redux performance and created responsive UI components with Material-UI, reducing load times by 40%.

Penn State College of Engineering

State College, PA

Research Assistant

Jan 2024 – Dec 2024

- Researched solar max and min phenomena, collaborating with researchers from London, Netherlands, and Turkey.
- Developed an algorithm to detect solar events with 70% accuracy by manually collecting and analyzing 5,000 data points.

Projects

AgriScience (Django, MySQL, Selenium, Predictive Machine Learning)

Feb 2024

Designed the full end-to-end AgriScience platform using Django and MySQL to optimize crop growth, predicting yield and profits for over 100 farms based on location, weather, farm size, and equipment. Integrated machine learning, APIs, and ChatGPT to provide a comprehensive growth plan tool for a hackathon project that supported data-driven farming.

Meal Plan Optimizer (React, Firebase, TypeScript, Tailwind, Puppeteer, Express)

Aug 2024

Developed a full-stack web application that automates PSU dining transaction analysis through secure web scraping and MFA integration, featuring a real-time analytics dashboard with spending insights and personalized recommendations, helping students optimize meal plan spending by 15%.

Real Estate Website (React, Node.js, Supabase, Stripe Payment Gateways,)

Jan 2025

Developed a modern, feature-rich real estate platform tailored to the subleasing industry, offering separate interfaces for buyers and sellers, integrating APIs such as geolocation, Walk Score, live chat, and review functionality with end-to-end encryption. Created an all-in-one solution to streamline home leasing and enhance the experience for prospective home seekers, targeting a user base of over 2,000 people with a sleek UI and seamless functionality.

Leadership Experience

Math 140/Phys 211/CMPSC Learning Assistant

Aug 2023 – Dec 2024

- Led 100+ one-on-one tutoring sessions, earning 95% positive feedback for clarity, patience, and complex problem-solving
- Enhanced learning materials by streamlining content into more concise formats, improving efficiency for students and instructors

EON-Head Mentor

Aug 2023 – May 2024

- Mentored 50+ Penn State students with effective communication and resource allocation, boosting retention by 15% through structured guidance and developed streamlined onboarding documentation, cutting redundancy by 60%.