Vaibhav Sen Malla

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Education and Skills

University of Michigan   Ann Arbor, MI
Master of Science (MS) in Data Science   Expected: May 2026

Pennsylvania State University   University Park, PA
Bachelor of Science (BS) in Information Sciences and Technology (Software Design & Development track)   Graduated: 2020
Major GPA: 3.67 | Dean's List, Gamma Tau Phi Honors Society

Extra Online Courses: Harvard's CS50x | Harvard's Intro to Artificial Intelligence in Python | Princeton's Algorithms Course
Full-Stack Web Development Bootcamp | Complete Python Bootcamp | Network Architecture Course
UC San Diego's Data Structures and Algorithms Course | UC San Diego's Graph Theory
Interaction Design: Designing, Running, and Analyzing Experiments | Georgia Tech's AI, Ethics, and Society

Skills:
Programming Languages: Python, Java, JavaScript, TypeScript, HTML, CSS, SQL, R
Frameworks/Software: MongoDB, Express.js, React, Node.js, SASS, Scrum, Linux, Git, Bash, Figma, Docker, Jenkins, AWS, Azure

Professional Experience

Software Engineer II, *Cradlepoint*   Boise, ID
- Built, released, and maintained the NetCloud Exchange platform (a 5G-optimized SD-WAN product)   Dec 2021 - May 2024
- Revamped Makefiles and Docker containers to enhance building and testing workflows of NCX
- Led core data migration project to AWS, successfully managed extensive multi-team code refactoring
- Automated pipelines for AWS/Azure deployment and AMI sharing using Python, Jenkins, and Docker
- Achieved a 94% reduction in processing time for 5-hour tasks from the implemented automations
- Established as go-to expert for NetCloud Exchange's monthly new version deployment plans to PROD

Web Developer, *Virufy*   Remote
- Built the company website using JavaScript and set up rapid deployment workflow throughNetlify   Sept 2020 - Oct 2020
- Delivered faster load times by using techniques like image compression to improve user experience
- Analyzed user activity using heatmaps and Google Analytics to enhance the site's SEO
- Collaborated with product designers and UI/UX team to implement UI changes in an agile environment
- Reduced user bounce rate by applying data-driven strategies and increased site traffic by 30%

Co-founder & Product Manager, *Gage Ventures*   University Park, PA
- EdTech startup developing behavior-tracking tools to assist teachers/parents of children with ADHD   Feb 2020 - July 2020
- Led planning of software architecture and UX design, ensuring alignment with target user preferences
- Directed development of MVP to rapidly test and validate product concepts (in React Native/Node.js)
- Selected for Penn State's Startup Accelerator Program (Summer Founders) receiving $15,000 in funding

HCI Research Assistant, *Penn State's College of Information Sciences and Technology*   University Park, PA
- Collaborated with PhD researchers on 4 projects for the Human-Computer Interaction research program   May 2019 - May 2020
- Primarily assisted the Visual Cortex on Silicon project, aiming to use AR, computer vision, and haptic prosthetics to help visually impaired people navigate in their daily lives
- Conducted usability tests on the prosthetics in scenario-based environments such as grocery shopping
- Designed 2 high-fidelity prototypes using Adobe XD and Figma for project proposals
- Conducted user studies for the PhamilyHealth project (a photo-sharing system to facilitate family health & wellness collaboration and communication)

Recent Projects

Hermes   July 2021 - Sept 2021
- Messenger app with Google/Facebook authentication made with React.js, Firebase, and Chat Engine

Super Mario World - Google Maps   Mar 2021 - Apr 2021
- Themed version of Google Maps made using Maps JavaScript API from the Google Cloud Platform

Keeper Notes App   Feb 2021 - Mar 2021
- Personal to-do list app built with React.js (frontend) and Node.js, Express.js, and MongoDB for backend

eFinance - Personal Financing App (team project)   Sept 2020 - Dec 2020
- Built using Java with JUnit for test-driven development. Authored functional requirements documents

Alan AI News Assistant   July 2020 - Aug 2020
- Conversational voice-controlled news app made with React.js and Alan AI speech recognition platform