JUSTICE VIDAL
SOFTWARE ENGINEER

RESEARCH DEVELOPMENT | ML & SOFTWARE ENGINEERING | HARDWARE DESIGN

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Innovative and impact-driven Full Stack Developer with a proven track record of Full Stack Development, Machine Learning Integration, and User Experience design. Demonstrated success in spearheading transformative projects, streamlining processes, and presenting technical innovations to internal and external stakeholders. Skilled in stakeholder engagement and delivering customized solutions. Highly adept at navigating the complete software development lifecycle and ensuring seamless integration of cutting-edge technologies to drive organizational success.

AREAS OF EXPERTISE

- ✓ Full Stack Development
- ✓ Research Advancement
- ✓ Leadership & Mentorship
- ✓ AWS Deployment
- ✓ Machine Learning Integration

- ✓ User Experience
- ✓ Software Engineering (SDLC)
- ✓ Web/Application Design
- ✓ Infrastructure Support
- ✓ Project Management

- ✓ Application Lifecycle
- ✓ Troubleshooting & Analysis
- ✓ Systems Administration
- ✓ Server Maintenance
- ✓ Hardware Design

PROFESSIONAL EXPERIENCE

MASSACHUSETTS INSTITUTE OF TECHNOLOGY | Cambridge, MA   **09/2019-Present**

MIT is a highly esteemed private university, driven by a shared purpose: to make a better world through education, research, and innovation.

Graduate Researcher/Full Stack Developer, Digital Humanities

Reported to the Technical Director as an Undergraduate Team lead guiding 10 undergraduate students to support, research, and drive projects for the MIT Digital Humanities Lab through technical infrastructure and front and backend software solutions.

Currently serving as the Lab's Technical Lead, managing a team of 12 undergraduate researchers.

- Spearheaded the comprehensive development of Python modules to streamline quiz question creation within the "Emerging Technologies for Language Learning" project; significantly enhancing user engagement and interaction with the platform.
- Collaborated alongside a team of 4 students to conceptualize and design an interactive archive featuring 100k historic images of 1970s Paris, utilized Django and React JS frameworks for seamless functionality and user experience.
- Orchestrated the integration of the YOLO machine learning model into the project infrastructure, optimizing the process of object labeling for high-volume images; enhanced searchability and accessibility within the immersive digital archive.
- Showcased the innovative "This was Paris in 1970" online photo archive at the prestigious 2021 Connecticut Digital Humanities Conference; effectively presented the project's significance and impact within the academic community and beyond.
- Demonstrated strong leadership in guiding 3 undergraduate student teams through the development of the "Self-Sufficient Cities" project using React JS; efforts yielded the successful delivery of a sophisticated and educational online platform.

Systems Administrator, Student Information Processing Board | *09/2021-Present*

Collaborated with board members, teams, and stakeholders to provide infrastructure support and maintenance to ensure optimal performance efficiency and system reliability for the MIT community.

- Served as President for 1 term and led weekly club meetings, fostering collaboration among members to discuss campus-wide activities; drove proactive solutions by ensuring effective communication and alignment with organizational goals.
- Implemented and oversaw comprehensive weekly protocols to monitor the functionality and reliability of production servers, cooling units, and UPS units; maintained and ensured 100% performance and reliability across campus infrastructure.
- Collaborated with leadership stakeholders and board staff to analyze and revise the power infrastructure of a campus server room; addressed critical system power requirements and ensured alignment to inform decision-making.

KEOLIS COMMUTER SERVICES | Cambridge, MA   **06/2021-06/2023**
KCS is a global public transport & mobility innovation leader and the Massachusetts Bay Transportation Authority Commuter Rail operating partner.

Full Stack Developer, Service Delivery Innovation Intern
Reported to the Director of Service Delivery Innovation and oversaw the design and implement new internal applications. Expanded the capabilities of existing applications through full-stack development.

- Revitalized an antiquated front-end certification management website in partnership with internal team to pinpoint personalization requirements; built an intuitive interface solution using PowerApps and PowerAutomate technologies.
- Addressed the need for a system for storing qualitative employee performance data using feedback from the Operations Integration Manager; resulted in the successful launch of an internal app for recording Train Conductor feedback.
- Engaged in strategic collaboration with Operations Planning to analyze, strategize, and resolve internal site issues; leveraged expertise to enhance system reliability and functionality and operational efficiency.
- Proactively solicited and integrated feedback from 3 product end-users by fostering a user-centric approach to application development; aligned user needs and preferences to deliver a tailored and intuitive resolution.
- Presented the finalized product specifications to key stakeholders, including MBTA and Keolis COO; showcased innovation, transformative impact, and value added to the organization through service delivery improvements.

ADDITIONAL EXPERIENCE

Teaching Assistant | MIT

EDUCATION

Master of Engineering (ME), Computer Science & Electrical Engineering, Expected: June 2025 | MIT
Bachelor of Science (BS), Computer Science & Electrical Eng, Physics | MIT

ACADEMIC AFFILIATIONS

President | Student Information Processing Board (SIPB)
Volunteer | Undergraduate Practice Opportunities Program (UPOP)
Volunteer Tutor | Eta Kappa Nu (EKN)
Member | Theta Delta Chi (TDC)

TECHNICAL SKILLS

Python | PyTorch | C++ | React JS/Bootstrap | Django | Typescript | x86 Assembly | CSS |SQLite | TensorFlow | PowerApps
MS Office Suite |GitHub | LTSpice | PSoC Creator | Spectre Circuit Simulator | PSoC 5 Microcontroller | STM32 | ESP32