



## PROFESSIONAL SUMMARY

*Vision-driven change agent with exemplary record of information technology success*

Proven talent for aligning business strategy and objectives with established software development paradigms to achieve maximum operational impacts with minimum resource expenditures. Results-focused candidate who champions innovative solutions to drive continuous improvement, mitigate project risks, analyze data, and provide key insights to inform strategic plans. Exceptionally dedicated professional with keen interpersonal, communication, and organizational skills for the modern tech landscape.

### CORE COMPETENCIES

- Web Applications
- Project Leadership
- Problem-Solving Expertise
- Tech Tools & Analytics
- Documentation
- System Design

## PROFESSIONAL EXPERIENCE

VIRGINIA TECH CENTER FOR POWER ELECTRONICS SYSTEMS (CPES), BLACKSBURG, VA, 2019 – PRESENT

### SOFTWARE ENGINEER

- Responsible for working unsupervised in designing and developing web applications for external and internal websites; this includes iterating through the entire lifecycle of an application and coordinating necessary workloads.
- Augment custom-built PHP framework by modifying SQL queries and data retrieval algorithms.
- Cooperate effectively with a small team to deploy and maintain Docker containers, Apache web servers, and Azure cloud storage.
- Drive the restructuring and normalization of existing MySQL schema to optimize performance and space requirements.
- Create bash scripts to automate LAMP server file structure and database backups.
- Liaise between departments to achieve technical projects and goals.

## PROJECTS

Full Stack Internal Website Rebuild <https://portfolio.matthewscanland.com/rebuild/>

- Accountable for executing the spin-up of a new web server and moving all pre-existing HTML and Google Apps Script to a LAMP stack featuring a custom PHP framework.
- Rebuilt all pre-existing applications from an Apps Script environment to a custom PHP MVC framework.
- Implemented a multi-factor phpCAS login system for greater security.
- Built admin pages and subsections featuring route protection and permissions.
- Established a MySQL database, focusing on interaction between contained applications.
- Created a local REST API to ease application communication.
- Assume responsibility for cleaning up existing core code to improve readability, algorithm speed, and functionality, in addition to promoting code scalability.

Lab Validation System <https://portfolio.matthewscanland.com/validations/>

- Built the complete internal Lab Validation System; this system tracks and calculates billing totals using student hours, accounts, holidays, vacations, and other data.
- Devised an SQL database schema that enabled future modifications and quick retrieval of data.
- Streamlined the validation process for all faculty, staff, and students; this resulted in cutting the validation timeframe to 1/4.
- Allowed staff to quickly view and edit information using a single-page app; this included statistics, missing signatures, exporting data as a CSV, and viewing activity in a FullCalendar UI.
- Integrated the student vacation system responsible for automating the process of inputting the same data into separate systems.

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**Purchasing & Reimbursement Systems**

- Crafted internal purchasing and reimbursement apps to coordinate the status of requests.
- Automated the purchasing and reimbursement process, allowing the staff to work on more important matters.
- Conceived a structured order of approval for requests, promoting more organized communication.
- Helped enable users to store personalized information for easy reordering and customized requests.
- Queried large datasets in near real time.

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**EDUCATION AND CREDENTIALS**

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**BACHELOR OF SCIENCE IN COMPUTER SCIENCE***Virginia Tech, Blacksburg, VA***CERTIFICATION***AZ-204 Certification in progress*

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**TECHNICAL SKILLS**

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**Programming Languages:** CSS, JavaScript, Java, JQuery, PHP, Python, SQL, C#**Tools:** .NET, Azure, EF Core, Apache, Docker, ElasticSearch, Git, Linux, MariaDB, phpCAS, RESTful API, Windows, and experience with Vue, AWS