# MATTHEW SCANLAND

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

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LinkedIn | GitHub | Portfolio

## PROFESSIONAL SUCCESS

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 public-facing and internal websites; including iterating through the full lifecycle of an application and coordinating workloads on schedule.
- Migrated the in-person annual conference to a hybrid event, thereby tripling attendance.
- Augment custom-built PHP framework by modifying SQL queries and data retrieval algorithms.
- Effective communication with diverse team to deploy and maintain Docker containers, Apache web servers, and Azure technical solutions.
- 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.

CORE COMPETENCIES

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

## SIGNIFICANT PROJECTS

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

- Spun-up a new web server and moved 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.
- Cleaned 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.

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.
- Enabled users to store personalized information for easy reordering and customized requests.
- Queried large datasets in near real time.

## EDUCATION AND SKILLS

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