

Matthew Scanland

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EDUCATION

Virginia Tech
B.S. Computer Science

January 2019
Specialization in Human Computer Interaction

TECHNICAL SKILLS

Programming Languages: JavaScript, JQuery, CSS, Python, PHP, SQL, Java

Tools: Git, Agile Methodologies, DBeaver, phpCAS, MariaDB, ElasticSearch, and experience with Laravel

IT Systems: Linux, Windows, Apache, Docker, Xibo

WORK EXPERIENCE

Webmaster and Digital Content Specialist - CPES, Virginia Tech, Blacksburg VA

04/2019 – Present

Center for Power Electronics Systems (CPES)

- Solely responsible for designing and developing web applications for the external and internal websites. Including iterating through the entire lifecycle of an application.
- Streamlined content creation by improving upon existing custom-built CMS.
- Work with a small team to deploy and maintain Docker, web servers, and cloud storage.
- Improved upon existing IT structure, allowing IT staff to work on more and other projects.
- Create workflows, identify problems, and self-prioritize needed applications for the organization.

SIGNIFICANT PROJECTS

Internal Website Rebuild, CPES (Center for Power Electronics Systems)

05/2019 – 08/2019

Move from HTML and Google Apps Script to a PHP/MySQL based framework.

- Rebuilt all pre-existing applications from an Apps Script environment to a custom PHP-based MVC framework.
- Implemented a multi-factor phpCAS login system for greater security.
- Upgraded existing server infrastructure to account for the new requirements.
- Implemented a MySQL database, focusing on interaction between contained applications.
- Cleaned up existing core code to improve readability, existing algorithm speed, and functionality.

Lab Validation System, CPES (Center for Power Electronics Systems)

08/2019 – 12/2019

Complete build of the internal Lab Validation System. This system tracks and calculates billing totals using student hours, accounts, holidays, vacations, and other facets.

- Database schema allows for future modifications and quick retrieval of data.
- Streamlined the validation process for all faculty, staff, and students involved.
- GUI lets admin staff quickly view and edit statistics, missing signatures, and export data.
- Integration of the student vacation system automates the process of inputting the same data into two separate systems.

ElasticSearch/Kibana, CPES (Center for Power Electronics Systems)

2022

- Modification of ElasticSearch functionality and site metadata to improve speed and accuracy of searches on the main website.
- Implementation of Kibana, a GUI to visualize ElasticSearch data.

GreenSites, Virginia Tech

01/2018 – 07/2018

Java Android application. Work with 3 other students on an android application to track sustainable campsites.

- Help design and code the front-end.
- Work in the field to track down examples of sustainable camping sites. Communicate this knowledge with the team to improve upon the application.

LEADERSHIP AND TEAMWORK EXPERIENCE

CPES Annual Conference, Virginia Tech

Annually in April

Along with the general day-to-day communication with other staff and faculty at CPES:

Coordination with all staff, students, and faculty to describe respective rolls regarding the online portion of the CPES Conference. Lead a team of students in data importing for the conference web platform. While the conference is running I work with faculty and students to manage attendees on Zoom Meetings, embedded in the conference website.