Christopher Greenwell

Harrow, London, HA1 1RE | Mobile: 07717678104 | Email: christophergreenwell7@gmail.com | LinkedIn

Profile

An aspiring software engineer who possesses the natural curiosity, problem-solving and adaptability needed to specialize in any type of web development. Established an interest in coding at university which progressed into learning full-stack technologies focused around JavaScript after graduation. Seeking a position in which I can utilize my logical thought process and fast learning to further my knowledge in both front and back end web development. **link to Portfolio**

Education

Civil BEng | July 2020 | City, University of London

- 1st class Bachelor with honours
- Geotechnical Engineering: 83%
- Structural Mechanics: 82%
- Mathematics I: 80.4%

GCE | August 2017 | Bishop Ramsey C of E School

- Physics: A
- Mathematics: B
- Economics: B

GCSE | August 2015 | Bishop Ramsey C of E school

- Advanced Free Standing Mathematics Qualification: A
- 10 GCSEs grades: A* - C (including Maths, English and Science at A*-A)
- Functional Skills Qualification in Information and Communication Technology: Level 2

Technical Skills

Front-End

- HTML5
- CSS3
- JavaScript (asynchronous functions, OOP)

Back-End

- Node.js (Express, EJS)
- MongoDB (Mongoose, atlas)
- JSON
- Postman

Projects

February 2021 | TrainSpota | view website | code

- Built a responsive website with an interactive Leaflet.js map that allows users to click on or search stations to obtain national rail data for passing or stopping trains.

- Used object oriented programming in JavaScript to develop the map UI and Leaflet map functionality.
- Created a simple backend with Node.js and Express.js that uses asynchronous functions to fetch API data from transportapi.com.

December 2020 | Mintfarm | view website | code

- Built a shopping website for a fake mint product company that allows users to log-in and fill a basket with items.
- Used column and navigation bar features from the bootstrap library in the creation of all web pages.
- Node.js/ Express.js backend with EJS for server-side rendered content on product pages that use product information retrieved from a database.
- Utilized schemas to create objects for users and basket items that are saved in a MongoDB atlas database via mongoose.
- Handled user authentication and sign-in with passport, using sessions to keep users signed in while browsing.
- Rendered the users basket client-side using DOM manipulation and asynchronous API calls, allowing for item deletion in both the rendered basket and database simultaneously.

April 2020 | Introduction of Timoshenko Beam Theory into an existing Finite Element Code

- Existing Euler-Bernoulli finite element code based on CALFEM (m-script) required the integration of Timoshenko beam theory to allow for a broader application of the code.
- Independently conducted both research and development of the code, coincided with regular meetings with the project supervisor.
- Introduced multiple functions to promote readability and isolate potential problems to particular sections of the code.
- Used nested for/while loops and if statements to conduct analysis of multiple beams within a 3D mesh.
- Created functions that change behavior based on the number of input arguments, allowing for distributed loads to be optionally considered.
- Surpassed the original task by adding addition functionality to the code allowing for users to switch between the two beam theories, apply distributed loads, and analyze uneven I-beam cross-sections.

Abilities

Visualization

- Being able to visualize complex problems in my head and breaking them down into smaller components allows me to develop deeper understanding of problems.

Problem-Finding

- Discovering aspects of a problem that others may not will allow me to ensure that all the information is considered when tackling a task, and will lead to the correct application of creative solutions.

Logical Thinking

- Understanding the sequential steps required to solve a problem is what lead to both my appreciation and enjoyment of coding and its real world applications.

References

- Roger Crouch (Professor of Computational Mechanics), PhD, MSc, DIC, BSc: rscrouch@mac.com