

## EDUCATION & CERTIFICATIONS

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**London** **Imperial College London** **Sept 2013 - June 2016**

- **Major:** Chemistry, BSc ARCS (2:1, 68%)
- **Minor:** Chemical Engineering
- **Chemistry Dissertation:** Research of computational models for carbon nanotubes in cyclo-addition reactions.
- **Utilized** Bash and Linux CLI to configure and schedule computations on the University's Super Computer Cluster.
- **Prize:** Best Dissertation Poster for Physical Chemistry

**Glasgow** **Strathclyde University** **Sept 2016 - Aug 2017**

- **Major:** Quantitative Finance, MSc (Distinction)
- **Coursework:** Algorithmic Trading, Evolutionary Computation, Stochastic Calculus, Econometrics
- **Industrial Dissertation (at Aviva):** Non-Linear and Machine Learning Models for Commercial Motor Fleet Claims Frequency.
- **Leveraged knowledge** of Generalised Linear Models, Neural Networks, Support Vector Machines, R Statistical Programming.

**Online ([teamtreehouse.com/14willh](https://teamtreehouse.com/14willh))** **Team Treehouse Courses** **Jan 2018 -**

- **Beginning JavaScript:** Loops, Arrays, Objects, ES6, Chrome Dev Tools, DOM Scripting
- **Front-End Web Development:** HTML, CSS, JavaScript, Responsive Layouts, Flexbox, Git, Bootstrap 4, Optimisation, AJAX, Object Oriented JavaScript, Web Accessibility Compliance
- **Full Stack Foundations & JavaScript:** Python Basics, Flask Basics, Fetch API, JavaScript, jQuery, Node.js
- **Other:** Beginning WordPress, SQL, Java, Android, Swift, & iOS. Intermediate Java

**Online ([udemy.com/user/will-henderson-10](https://udemy.com/user/will-henderson-10))** **Udemy** **March 2018 -**

- **Complete Node.js (Finished):** Note App, Asynchronous Weather App, Production Heroku Deployment, Testing, MongoDB, Mongoose, RESTful Todo API, JWT Authentication, Socket.io Chat App, Async/Await
- **AWS Solutions Architect Associate (Current):** IAM, S3, Glacier CloudFront, EC2, Load Balancing, Cloud Watch, Autoscaling, Route53, Databases, VPC, API Gateway, Serverless, Lambda, The Well Architected Framework

**Online ([freecodecamp.org/wah](https://freecodecamp.org/wah))** **Free Code Camp** **October 2018 -**

- Responsive Web Design Certification
- JavaScript Algorithms and Data Structures Certification

## WEBSITES

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### Personal Website & CMS: [whenderson.net](https://whenderson.net)

- Developed my own Content Management System (CMS). Blog about development, projects I have been working on, anything interesting.
- **Built with:** Node, Express, MongoDB, Mongoose, bcrypt, JWTs, RESTful, Handlebars Templating, Memcached, ES6/ES7+, Bootstrap 4
- **Tested with:** Mocha, Jest-Expect, Supertest, Postman, Robo 3T
- **Deployed with:** AWS EC2, Nginx, Linux, PM2, Git, GitHub

### Event Photo & Message Sharing App: [photoreel.co.uk](https://photoreel.co.uk) (use passcode 'test')

- App for sharing event photos and messages privately. Implemented a realtime display mode feature. Used at a wedding in June 2018.
- **Built with:** Node, Express, MongoDB, Mongoose, bcrypt, Pug Templating, ES6, Multer, Sharp Image Processing, CSS Grid.
- **Deployed with:** AWS EC2, Nginx, Linux, PM2, Git, GitHub

### Fitness Website for a Self-Employed Pilates Instructor (Freelance Work): [janespilates.com](https://janespilates.com)

- Static website with a contact form that sends no-reply and notification e-mails using Nodemailer. Google Map API for showing locations.
- **Built with:** Node, Express, Nodemailer, Google OAuth, Google Map API
- **Deployed with:** AWS EC2, Nginx, Linux, PM2, Git, GitHub

### Simple Chatroom App: [whenderson.net/chatter](https://whenderson.net/chatter)

- Create a new chatroom or join an existing one. Realtime messaging with TCP socket connections. Shows a list of active users.
- **Built with:** Node, Express, Socket.io, Lottie.js
- **Deployed with:** Heroku, Git

### The Future Collection E-Commerce: [whenderson.net/thefuturecollection](https://whenderson.net/thefuturecollection)

- Simple example e-commerce site for a fictional fashion brand. Uses the Stripe Payment Gateway with Custom Checkout.
- **Built with:** Node, Express, Handlebars, Memcached, Bootstrap, jQuery, Stripe
- **Deployed with:** Heroku, Git

## SOFTWARE, IoT & ELECTRONICS PROJECTS

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### Universal Remote Bluetooth IR Transceiver with Android and iOS applications

- **Utilized:** Arduino, Java, Android, Swift, iOS, IR Protocols, Bluetooth Low-Energy

### Atoms Remote - Sky Q Remote Android App (Published on Google Play Store Nov 2018): [goo.gl/qYt7i1](https://goo.gl/qYt7i1)

- **Utilized:** Android, Java, Gradle, Google AdSense and Facebook Audience Network integration

### Wireless power station for the Amazon Echo Dot

#### Raspberry Pi IoT Device

- **Utilized:** Linux, Python, Flask.py, Node.js, NaCl End-to-End-Encryption, Web Scraping with Puppeteer

#### 8-bit CPU using TTL logic chips and EEPROMs

- **Utilized:** Digital Computer Electronics, The 8080/8085 Instruction Set Family

### Scuffle NPM Package: [npmjs.com/package/scuffle](https://npmjs.com/package/scuffle), [github.com/14willh/scuffle](https://github.com/14willh/scuffle)

- Prevents Node.js timing attacks using a combination of Knuth Fisher-Yates shuffling and random sleep (defined in  $\mu$ s).
- **Utilized:** Node.js, JavaScript, Git, GitHub, npm