> "I am a goal-orientated, focused software engineer with 5 years of programming experience; a compassionate collaborator with high integrity and strong leadership skills."

# Charles Benson

DEFI & WEB3
SOFTWARE ENGINEER

## Details
SE1 6RW, London
United Kingdom
07450059035
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## Links
GitHub
LinkedIn
Twitter
Smart Contract Hacking Repository
Technology Research Blog

## Projects

### Solidity Smart Contract Hacking and Security Exploits

My GitHub repository presents the detailed breakdown and analysis of the security exploits in OpenZeppelin's Ethernaut Smart Contracts. Tutorial for the development of malicious contracts and smart contract hacking methods (see "Links" section).

### Web3 Defi Protocol Development

Developing Defi protocol using EVM Chain Smart Contracts. Incorporating time-locking and off-chain automated control of crypto assets. Utilising Chainlink Oracles, with TLS secured APIs. (Solidity, Chainlink Keepers, Ethers js, Waffle, Hardhat, Alchemy API, Chai Js and Slither, React and Injected Web3 (Metamask)).

### Research Blog – 8051 Microprocessor

Controlling and monitoring a Keypad/Display Unit using the 8051 Microprocessor. The electronics and software of my 8051 Assembly language program (see "Links" section).

## Technical Skills
Python, JavaScript, Ethereum & Solidity, Java, OOP, C,

Assembly Language, Git, SQL, Docker,

HTML & CSS , React

## Skills

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|---|---|
| Critical Thinking & Problem-Solving. | Time Management & Organisation. |
| Excellent Interpersonal Skills. | Teamwork & Collaboration. |
| Leadership & Management. | Strong Focus, Discipline & Perseverance. |

## Hobbies

### Web3 & Defi Development
Completion of the OZ Ethernaut Smart Contract Hacking Challenges.
Attended Chainlink Spring 2021 Hackathon and London Coin Bureau Conference 2022.
Passionate to gain diverse expertise in Web3, Blockchain, and Cloud computing.

### Hardware
Constructed, wired, and programmed a full-scale UAV drone, aged twelve.
Built high-performance PCs since the age of fourteen.

### Music
Avid guitar player and music theorist since 2018.

### Sport
Parkour – practised since the age of eleven, travelling the UK to various competitions and challenges.
Karate – achieving blackbelt at the age of fifteen.
Diving – student of the Tom Daley High Diving Academy.

## Employment History

### Web3 Developer (Freelance), Undisclosed, London - May 2022 - Present

Developing 'Minting' and 'Marketplace' smart contracts for NFT proof of authenticity of clients' real-world products. (OpenZeppelin ERC721 Standard on Polygon network).

(Slither and ChaiJS for security, auditing and testing). (Pinata IPFS API for metadata).

(Hardhat, Waffle, Ethers js, Alchemy, and React JSX for Mint/Transfer UI).

### Database Developer (Freelance), Wivey Cares Charity, Wiveliscombe - Jun 2021 – Aug 2021

Development of a UI WebApp for the management of the charity's data. Engineered, formatted, and migrated their legacy data (Microsoft PowerApps & Dataverse, VBA, SQL).

### Software Developer (Intern), aCommerse Co, Bangkok - Feb 2020 – Mar 2020

Importing and transforming historic data from the online marketplace and injecting it into the company system for analysis. Created interactive web UI for the process using: Django, Python, VPN secured REST API calls, SQL, data analysis, mapping, and testing.

### Data Engineer (Freelance), Intracon Inspection Services, Taunton - Aug 2019 – Nov 2019

Migrated historic shipping container inspection surveys from a legacy .asp to a WordPress-based site (SQL, VBA Excel data engineering, data import and mapping to create data visualisation).

### Construction Site Labourer, Private Construction Consultant, Taunton - Jan 2017 – Nov 2019

Exercised initiative, time management, organisation, and planning skills; essential for a successful, efficient, and effective engineering project.

Instilled solid fundamentals for system architecture (planning, management, and organisation of a system).

## Extra-curricular Activities

### President of Poker Society, Queen Mary University, London - Sep 2021 – Present

Management of society operations; organisation of social events, budgeting, generating society income, and marketing to expand the society's reach.

Exercising leadership, management, organization, forward-thinking, marketing, and economic skills; Teaching and practising poker's beneficial psychology/strategy.

## Education

### BEng Robotics Engineering, Queen Mary University, London - Sep 2020 – Present

Achieved Second-Year average of 79% and First-Year average of 70%. Notable Modules inc. Design/Build Robotics Project, OOP, C, and Procedural Programming. Predicted to graduate with First Class Honours in July 2024.

### 3 A-Levels, Richard Huish Sixth Form College, Taunton - Sep 2017 – Jul 2019

Maths (A), Physics (B), Computer Science (B)

### 10 GCSEs, Kingsmead Community School, Wiveliscombe - Sep 2012 – Jul 2017

6A's, 3B's, 1C – incl. Maths (B), Physics (A), Chemistry (A)