Madison A. Nelson

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PROFESSIONAL SUMMARY:

Driven and hardworking second-year Computer Science student at QMUL, actively developing practical skills in Python, Java, and web development. A creative problem-solver who thrives under pressure and enjoys both independent and collaborative projects. Committed to pushing myself to learn and apply my knowledge across various fields, including software engineering and cybersecurity, to devise effective solutions to today's tech challenges. This spring term, I am also embracing a teaching role, helping primary students learn Python programming.

EDUCATION:

Queen Mary University of London   09/2023 – Current

BSC Computer Science

1st Year 92.5% average   Relevant Modules: Software Engineering, Object Oriented Programming, Procedural Programming. Information System Analysis

Whitmore High School   A Level and GCSE   09/2016 – 07/2023

- A Level – Computer Science (A*), Maths (A*), Further Maths(A*), History(B)
- GCSEs: 11 grade 9-7

PROJECTS: GitHub: https://github.com/M-A-Nels

Portfolio website -: HTML, CSS, JS, PHP, SQL (static version) hosted at https://m-a-nels.github.io/M-A-N-Portfolio-Website/

Developed a dynamic portfolio website. Using the back-end technologies – PHP and SQL to work on the blog (loading posts, logins, forms etc) – though only a static version is hosted so this is disabled currently using JS as a replacement. The site showcases my skills in web development front-end and back-end.

Sudoku Solver game –: Python, Pygame at https://github.com/M-A-Nels/Sudoku-Solver-and-Game.git

Developed an interactive Sudoku game with a graphical interface, featuring random puzzles, user input, and visual feedback. Implemented Backtracking algorithm to solve puzzles. Utilized Python and Pygame to handle UI design, game logic, and user interactions.

Horse Race Simulator -: Java, Swing, OOP at https://github.com/M-A-Nels/HorseRaceSim.git

Developed a horse racing simulation game with both text-based and graphical interfaces. The project featured race simulation, horse data management, and betting mechanics. Utilized Java and Swing for UI design, OOP for game logic, and multithreading for real-time race progress. Managed project versions using Git/GitHub with distinct branches for text and GUI versions.

Polish Notation Java Calculator -: Java, Java Swing - https://github.com/M-A-Nels/Calculator_Java.git

Developed a Java-based GUI calculator with features including traditional-to-Polish conversion, error handling, and recall of the last result. Demonstrates problem-solving skills and proficiency in Java and GUI development.

WORK EXPERIENCE:

Jelly James Publishing: 1/8/2022 -12/8/2022

Freelance Position

- Created a range of math worksheets tailored to support students with dyscalculia, offering both visual and numerical solutions to improve understanding.
- Developed an effective solution to meet tight deadlines, completing dozens of worksheets and corresponding answer keys daily without sacrificing quality.

Queen Mary University of London   09/2024 – Current

Demonstrator for Module ECS407U (Logic and Discrete Structures)

- Assisting 1st year Students one to one in their labs for this module.
- Helping to correct understanding of topics and technologies used.

Cisco - Pathway to your Future – Online Work Experience   14/2/22 – 17/2/22

- Collaborated in a group to design and present a proposal for a tech solution aligned with Cisco's core values, demonstrating problem-solving, teamwork, and presentation skills.
- Gained exposure to software development processes and industry best practices through talks and workshops with Cisco engineers and technology experts.

Moreton Bay Regional Council Entrepreneurship & Innovation: April 2024

Web Development Job Simulation on Forage

- Completed a job simulation involving website planning and creation.
- Created a sitemap and user flow using a diagram creation tool.
- Used HTML & CSS to create a landing page.

Bright Network – Internship Experience UK 2024   17/6/24 -20/6/24

- Attended expert-led sessions by industry specialists from leading companies such as Lloyds and PwC, gaining insights into innovation and emerging technologies.
- Took on the role of Product Manager in a project, developing a brief to improve a fitness app, focusing on user experience, feature enhancements, and integration of new technologies.

Skills:

Soft Skills: Teamwork, Problem Solving, Adaptability, Creativity, Communication, Detail-Oriented **Technical Skills:** Python, Java, HTML, CSS, PHP, SQL(MySQL, NoSQL), C#, Object Oriented Programming, Procedural Programming, Algorithmic Thinking, Version Control

Others:

- **Bronze Duke of Edinburgh**
  - Collaborated in teams to navigate challenges and develop teamwork skills in a two-day one-night trip.
- **Sports Leaders Level 2 national qualification**.
  - **Volunteered** at Primary School Tennis club – teaching younger years basic moves and leading exercises for **10+ hours**
  - Developed leadership skills by planning and assisting with events and conducting personal assessments to identify areas for improvement
- Certification in Python from Codedex and ongoing in Web-development and data analysis languages.