

John Le Houillier

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Experience

Marsh McLennan Agency, *Application Developer*

May 2024 - Present

- Recognized as stand-out in a performance review, a distinction awarded to top 20% of a department with over 200 employees, delivered linear classification training to department focusing on practical applications
- Designed and deployed a machine-learning classifier to pre-filter LLM prompts, reducing token usage by 75% reducing total context token count to less than 3000 tokens, improving prompt accuracy
- Rearchitected SSIS packages and REST API endpoints to a new service, supporting 1M+ daily payroll transactions, added QOL features that prevented input errors resulting in no support tickets since deployment
- Developed a renewal feature for a client-side portal that contributed to a >95% renewal rate with more than 1000 renewals; feature remains in active use after 2 years, managing ~3,800 yearly enrollments

CGI, *Software Developer (Clients: Marsh McLennan Agency, Optum)*

Jun 2022 - May 2024

- Initiated and executed W3C standard accessibility fixes utilizing ARIA and JavaScript within two months, securing a \$1M bonus for CGI while improving inclusivity and usability across the platform
- Engineered a secure multifactor authentication system with .NET, C#, and JavaScript for a seamless user experience, enhancing overall security while meeting business and compliance requirements
- Earned the role of back-end developer for a multi-site project by showcasing expertise and valuable contributions during code reviews; responsible for designing, implementing, and documenting a SQL database
- Completed CGI-based training in .NET, resulting in the development of a full-stack website that earned an "Exceeds Expectations" rating, subsequently selected to mentor 2 peers undergoing the same training

I Apply Math In My World (PhD Project), *Lead Software Developer*

Jan 2022 - Sep 2023

- Led the sole architecture and development efforts of a proof-of-concept for a web-based game utilizing Next.js, delivering a scalable and maintainable foundation that shaped the project's technical direction
- Implemented RESTful APIs and a MongoDB back-end to service the expected 500 users while gathering user and session data, significantly aiding the client's doctoral research, while maintaining data privacy compliance
- Established and directed a 5-person development team and utilized Agile methodologies to meet the go-live deadline with all the client's requirements and wish-list features, delivering a bug-free and stable product
- Co-authored a research paper that was recognized by the Society for Information Technology & Teacher Education, delivering clear and concise technical documentation that supported the paper

Oracle, *Software Development Intern*

May 2021 - Aug 2021

- Authored a patch into OpenJDK, implementing the "code snippet" tag across 12 Java core libraries and developing a tool to automate its adoption in Java documentation
- Developed a machine vision system in Python to automatically extract and total itemized receipts, converting unstructured images into structured financial data

Skills

Languages: C#, Python, JavaScript, TypeScript, Java, PHP

Web & Frameworks: HTML/CSS, React, Next.js, .NET, Blazor, Java Spring

Databases: SQL, MySQL, MongoDB, Microsoft SQL Server, Oracle Database

AI / ML: PyTorch, TensorFlow, scikit-learn, LangChain

Core Competencies: Full-Stack Development, ML & AI, Payroll & Financial Systems, Healthcare Software

Education

University of Pennsylvania

2025 - Present

Masters of Engineering, Artificial Intelligence, GPA: 4.0

University of North Carolina at Chapel Hill

2018 - 2022

Bachelors of Science, Computer Science, GPA: 3.5