Henry McDonald

Full Stack Software Engineer

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Skills

- **Advanced**: JavaScript, ES6, Java, React.js, HTML, CSS, Bootstrap 4, SCSS, LESS, Node.js, Express.js, Python, SQL, PostgreSQL, Sequelize ORM, MongoDB, MongoDB Atlas, Heroku, Git, GitHub, GitLab, R, Excel, Pandas, Numpy, Scikit-learn, HTML5, CSS3
- **Proficient**: C#, Selenium Webdriver, C, Typescript
- **Certifications:**
  AWS Developer Associate -- demonstrates proficiency in developing, deploying, debugging public cloud applications on AWS
  AWS Machine Learning Specialty Certification -- Design and implement scalable, cost-optimized, reliable, and secure ML

Experience

Analytics Consultant, Tredence   Aug 2019 - Present

Fortune 500 Industrials Company | ML development and Data Harmonization
- Developed Sales Strategy Machine learning model development for shortlisting of most promising leads, in Python
- Drove data harmonization efforts across multiple data sources, resulting in a 30% reduction in records
- Supplied stakeholders with insights into process execution, runtime, scaling of critical data cleansing processes

Fortune 500 Basic Materials Company | User-Driven ML Development and Deployment
- Implemented Statistical Forecasting Initiative across 70 products, resulting in a 7% improvement in demand estimation
- Developed a machine learning solution from the ground up using Pandas, Scikit-learn, testing, training, and optimizing several models, UI/UX iterations, and working with the operations team on the ground to achieve a successful live deployment
- Supplied stakeholders up to the C-suite level with insight into KPIs and root cause analysis of key business challenges

Fortune 500 Retail Company | ML Development and Business Insights
- Developed multiple machine learning models targeting key performance indicators, supplying insights to the mobile application development team, resulting in improved user experience and end-user retention
- Supported software engineers/technology team with data-driven insights utilizing A/B testing, natural experiments, enabling developers to improve business outcomes by 5%

Projects

Portfolio.Dev | Self-Serve Web Deployment Service | React.js, MongoDB, Node.js
- Built a website to render static user-generated HTML/CSS multi-page web content on a self-serve basis
- Utilized React Router's path parameters, wildcard matching, link click interception enabling self-serve deployment
- Persisted user-generated content in MongoDB, sanitizing at the Express server layer to provide enhanced security
- Implemented Google Oauth, removing the need for password management, and thus streamlining the user experience

RelateD | Social Network | React.js , CSS, MongoDB, Node.js
- Designed a full-stack newsfeed-centric social media web application with a team of 3, utilizing ownership-based agile project management methodologies
- Engineered a persistence layer with MongoDB, maintaining global state of posts, replies, comments, and likes in the read-optimized schema
- Implemented JSON Web Token-based authentication and authorization, preserving global state read-write integrity

Stonkhub | Paper Trading Brokerage | EJS, Express.js, Node.js
- Created web-based paper trading application, leveraging IEX's real-time stock price data to mimic real trading conditions
- Built out server routes adhering to RESTful convention with express backend, creating persistence layer and global state
- Implemented encrypted cookie-based authentication/authorization with best practices, allowing user signup, hashing

Just Read The Instructions | Scoot and Shoot game | Javascript, HTML, Canvas
- Developed, designed an in-browser WASD - game using Javascript & HTML5 canvas
- Implemented multi-layer collision detection, movement algorithm, on-demand character creation, for rich experience
- Utilized inheritance-based approach to create multiple tiers of characters with different abilities and movement patterns

Education

General Assembly, Software Engineering Immersive – Seattle, WA   Jan 2021 - Apr 2021
Full-stack software engineering immersive student in a collaborative, twelve-week, 450+ hour program focused on full stack web development best practices, software development lifecycle, test-driven development, computer science fundamentals

University of Illinois at Urbana-Champaign – Urbana, IL   Aug 2015 - May 2019
Bachelor of Science, Industrial Engineering