Kevin Shi

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EXPERIENCE

Trellis Studios | Full Stack Engineer

September 2020 – Present | New York, NY (Remote)

- Developed new features and bug fixes for a Vue.js application according to UX/UI design mocks and engineering specifications
- Created an interactive demo to guide potential users through key features, improving the onboarding experience and increasing user engagement
- Configured and maintained CI/CD pipelines using GitLab CI/CD, and Jest to run unit tests, and streamline development
- Assisted with the integration of Stripe API to handle customer subscriptions, and online payments
- Maintained AWS cloud services including IAM accounts, Cloudfront distributions, DynamoDB, and S3

Harvest Measurement | Full Stack Engineer

May 2017 – August 2018 | Hamilton, ON

- Developed a single page application from the ground up using React and a MVVM architecture
- Incorporated responsive web design to greatly enhance the user experience for mobile devices
- Led development of an extensive RESTful back-end built with TypeScript, Node.js, Express.js, and MySQL built with Node.js, Express.js, and MySQL
- Automated migration of onsite data from files to a database with bash scripts to save 100+ hours of work
- Restructured MySQL database with relational models to reduce redundancy and improve response time by 12%

PROJECTS & PUBLICATIONS

Surprisingly Popular Voting Recovers Rankings, Surprisingly! | *Presented at IJCAI-2021* | *arXiv*

- Contributed to a paper extending the 'surprisingly popular' algorithm in social choice theory to uncover the true rankings of multiple candidates through the use of preferential voting
- Designed an interactive online survey with Meteor and MongoDB, answered by 720 participants recruited through Amazon Mechanical Turk
- Wrote R scripts to aggregate and plot responses according to various voting rules

Chess Helper | *kevinshi97/chesshelper*

- Created a machine learning program to examine images of chess boards and suggest the best move using Python, Pytorch, and OpenCV
- Incorporated traditional image processing techniques, such as edge detection and feature extraction, to identify the board and the position of the pieces
- Designed a U-net CNN classifier to differentiate pieces and generate valid board states with 1% error

EDUCATION

University of Toronto | September 2015 - April 2020 | Toronto, ON

Honours Bachelor of Science in Computer Science | Specialization: Machine Learning | Minor: Mathematics

SKILLS

- **Web Development (Client Side)**: Vue.js, React, HTML, CSS/SCSS, JavaScript, TypeScript,
- **Web Development (Server Side)**: Node.js, Express.js, MongoDB, MySQL, PostgreSQL
- **Machine Learning & Computational Science**: Python (Pytorch, TensorFlow, SciPy, OpenCV, Numpy, Matplotlib), Julia, R, MATLAB
- **Tools**: Git, Linux, Docker, ESLint, Jest, AWS (Cloudfront, DynamoDB, IAM, Lambda, S3)
- **Other Languages**: Bash/Shell, Batch, C/C++, Java