Shibo Wang

Toronto, ON **Cell: (905) 261-0912** **shibowang7@gmail.com** **LinkedIn**

Software Engineer skilled in frontend/backend development, cloud platforms, testing, databases, and machine learning. Experienced in building full-stack frameworks and data-driven solutions.

KEY SKILLS

- Programming & Frameworks: C#, C++, Java, JavaScript, Python, HTML, CSS, Angular, React, React-Native, Node.js, Vue.js, .NET, Spring Boot, UI/UX
- Big Data Technologies: Apache Spark, Hadoop
- Databases: Oracle, MY-SQL, MongoDB Atlas, DynamoDB, Firebase
- Tools: Jira, Atlassian, Confluence, Git/GitHub, MS Project, Visio, PowerBI
- Cloud Platforms: AWS, Azure
- Soft Skills: Proficient in software development with strong problem-solving skills and the ability to learn quickly. Detail-oriented team player adept at following instructions and collaborating effectively.

EDUCATION

Software Engineering Technology - Artificial Intelligence Advanced Diploma (Co-op) **Sept 2021 - Dec 2024**
Centennial College, Scarborough, ON GPA 4.4/4.5

Aviation Technology - Avionics Maintenance Diploma **Sept 2015 - July 2017**
Canadore College, North Bay, ON

RELEVANT WORK EXPERIENCE

Software Engineering Research Assistant (Co-op) **May 2023 - Sept 2024**
Healthcare Systems R&A Inc., Mississauga, ON

Health Prediction Mobile APP Development

- Key Responsibilities:
  - Conducted data exploration and visualization using the DUKECATHR dataset, highlighting imbalances for better understanding.
  - Developed and tested multiple machine learning models (ANN, Logistic Regression, SVM, SGD, Gaussian Naive Bayes, Decision Tree, Random Forest, and XGBoost), ensuring robustness through SMOTE and cross-validation techniques.
  - Implemented feature selection and engineering techniques to improve model accuracy.
  - Collaborated with cross-functional teams to integrate predictive models into the mobile app.
- Achievements:
  - Improved model performance by balancing accuracy, precision, recall, and F1 values, enhancing model reliability by **30%**.
  - Contributed to developing a robust classification model for predicting patient conditions, aiding in early diagnosis and intervention.

Chronic Lower Back Pain Detection & Correction Mobile APP Development

- Key Responsibilities:
  - Increased 25-Landmark Model accuracy using customized data augmentation methods.
  - Implemented custom methods to enhance masked image heatmap keypoint detection models.
  - Researched and applied advanced machine learning techniques to improve detection accuracy.
  - Coordinated with healthcare professionals to refine detection algorithms and user interfaces.
- Achievements:

- Improved model accuracy from **73%** to **96%**, enhancing keypoint prediction reliability and precision.
- Developed a robust neural network model for 2D landmark prediction, implementing an SVD joint classification method.

Rapid Diagnostic Test (RDT) Strip Image Analyzer Desktop Software Development

- Key Responsibilities:
  - Implemented plot visualization and data representation using Python and OpenCV.
  - Developed baseline functionality for noise reduction and increased pixel intensity for better image clarity.
  - Automated image processing workflows to enhance efficiency.
  - Conducted user testing to refine application features based on feedback.
- Achievements:
  - Developed and deployed a desktop app tailored for our client improving his workflow efficiency by **300%**.
  - Enhanced accuracy and reliability of band detection and quantification by **50%** using OpenCV.
  - Through client feedback, Improved user experience and productivity with clearer data visualization/UI.

Software Developer (Part-Time) **May 2024 - Oct 2024**

WIMTACH - APCI project, Scarborough, ON

AI Transcription Technology Development

- Key Responsibilities:
  - Utilized Silero and Rnnoise models for noise reduction and voice activity detection on iOS devices.
  - Employed Pyannote's Vosk model to transcribe audio to text subtitles.
  - Designed and implemented real-time speech processing pipelines.
  - Conducted performance testing to ensure transcription accuracy and speed.
- Achievements:
  - Reduced Word Error Rate (WER) from **0.40** to less than **0.10** percent.
  - Improved the accuracy and reliability of speech-to-text transcription, enhancing the overall performance of the Avondx VA system.

Investigating a Minimum Viable Product (MVP) for Tree Canopy Planning Mobile App

- Key Responsibilities:
  - Developed a cross-platform mobile app using React Native with backend functionalities in Python.
  - Leveraged AWS for user authentication, data storage, and deployment.
  - Integrated real-time data processing and analytics features.
  - Collaborated with environmental scientists to optimize tree placement algorithms.
- Achievements:
  - Successfully released the MVP with all the features, including creating polygons in Google Maps and optimizing tree placement.
  - Solved the circle packing algorithm problem, enhancing application performance and reliability, and achieved client satisfaction.

ACADEMIC EVENTS

Hackathon: Bus of the Future **March 2024**

WIMTACH & Toronto Transit Commission (TTC)

- Collaborated with a team to develop a real-time bus incidence prediction system using AI and machine learning, earning **third** place in the competition. Gained hands-on experience and deepened understanding of emerging technologies in transportation.

LANGUAGES

Fluent in Mandarin and English