Chengzhuo XIONG

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- **Location: Pittsburgh, PA.**   - **GitHub：https://github.com/CzXiong1024**

Educational Background

University of Pittsburgh, USA	**08/2022-04/2024(expected)**

Master of Information Science, School of computing and information   *GPA: 3.92/4.0*
Courses: data structure, algorithms, database management, cloud computing, machine learning…

The University of Edinburgh, UK	*Visiting Research with Professor Yong Lu*	**07/2019-09/2019**

Southeast University, China	**09/2014-06/2021**

Bachelor & Master of Engineering in Civil Engineering   *GPA: 88.38/100*   *Rank: 1/95*
- *National Scholarship from Ministry of Education*   *top 1.9% (19/1000)*
- *Graduated with highest honor in 06/2021, Excellent Master's Dissertation in 2022*   *top 1.3% (2/150)*

Skills

- Java, Python, R, Golang, MATLAB, C# .NET, VB .Net, JavaScript, CSS, HTML, xml
- Git, GRPC, NNG, WPF, Prism, WinForm, MongoDB, MySQL, Neo4j, React, Nodejs, Springboot, Mybatis, Hadoop, Cassandra

Work Experience

Agilebot Robotics Co., Ltd, Shanghai, China   **SDE Internship**   **05/2023-07/2023**
- Participated in the development & maintenance of 3 core projects: Charcoal,**Compass,Agilebot.IR.SDK**
- Resolved a total of **158 issues** on time, accelerating the testing and release of the Compass and SDK projects by several days.

Gemdale Corporation, Shanghai, China   **Assistant** *Project Manager*   **06/2021-12/2021**
- Managed construction projects, supervised on-site construction of general contractors, subcontractors

Project Experience

PPG Paint Color Library Prediction (Machine Learning Project)   **11/2023-12/2023**
- Independently conducted a machine learning project for predicting PPG paint color outcomes, using real data from PPG Industries. Applied methods such as Generalized Linear Models, Random Forests, Neural Networks, and Gradient Boosting Trees. Trained over 20 models for both regression analysis and classification (logistic) tasks, and comprehensively evaluated RMSE, MSE, R^2, ROC, and accuracy metrics to optimize model performance.
- The best-performing model achieved 0.99 R^2, 0.87 accuracy, and 0.89 ROC AUC on the hold-out dataset provided by PPG, demonstrating efficient color outcome prediction capabilities.

Compass (Internship Project)   **05/2023-07/2023**
- Compass is an industrial robot visual automation software from *Agilebot*. Robots can recognize objects from camera vision and execute pre-set trajectory movements with Compass. Developed with WPF framework, in C# .NET, and backend modules in Golang.
- Developed/debugged various issues and enhanced features such as form validation, program stability, disk cleaning, and handling of control error messages.
- Independently and surpassingly developed a **license module** for the project using **AES** algorithm, matching the host's unique MAC address (Base64 encoded) and the generated ciphertext (saved locally) to determine software activation, thus limiting/providing software functions.

Joy-Go E-Commerce Website (Course Project)   **Developed with MERN Stack**   **03/2023-04/2023**

Master's Dissertation (SEU): Seismic Performance of Dry-connected Precast Concrete Structures Considering Floor Effects by OpenSees & MATLAB (with data analysis contents)   **06/2019-06/2021**
- Innovatively proposed a 3D nonlinear numerical modeling method for typical dry-connected beam-slab components. Optimized the iterative algorithm during nonlinear modeling and addressed convergence issues in discrete numerical analysis. Published two SCI journal articles. The master's thesis was published on CNKI and was rated as an outstanding master's thesis in 2022 (3 selected in the same major).

Publication (*sci journals*)

De-Cheng Feng, **Cheng-Zhuo Xiong**, Emanuele Brunesi, Fulvio Parisi, Gang Wu. *Numerical Simulation and Parametric Analysis of Precast Concrete Beam-Slab Assembly Based on Layered Shell Elements, Buildings*, 2021,11(1), 7, 12/24/2020.

Cao, XY., **Xiong, CZ.**, Feng, DC. et al. Dynamic and probabilistic seismic performance assessment of precast prestressed reinforced concrete frames incorporating slab influence through three-dimensional spatial model. Bull Earthquake Eng 20, 6705–6739 (2022).