

刘实

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Henan Province



EDUCATION

Central South University-Software Engineering

Aug 2017 - May 2021

- GPA: **89.78 (27/179)**
- Honorary awards: **three national honors** (all as team leaders), **one provincial honor**, **six school/college honors**, and **three software copyrights**

Zhejiang University-Software Engineering

Sep 2021

- GPA: 90.3, Postgraduate Mathematical Modeling National Second Prize
- The tutor is Professor Chen Wei, who has half a year's internship according to the laboratory training plan.

Internship experience

Visual analysis software for water margins temporal and spatial(algorithm, performance optimization)

May 2019 - Mar 2020

- Project Description: From the perspective of scientific research, the project aims to propose a new set of story line visualization layout algorithm; from the perspective of digital humanities, the project is based on the water margin space-time data visualization, different from the traditional case analysis, this method can achieve the overall story and related characters correlation analysis
- Work content: based on **Vue and D3.js** to achieve thermal analysis, migration analysis and faction analysis; Design story line layout algorithm, based on **JS(ES6)** to reproduce the algorithm; Using **Canvas, Web Worker, OffScreenCanvas** and other means for performance optimization
- Work results: received a **software copyright**, later planned to produce papers

Project experience

EasyToDraw: Interactive Graphic Grammar (Graphic Grammar, Modularity)

Apr 2021 - Jun 2021

- Project Description: Design and implement a set of declarative syntax for charting, and implement a prototype system. Through EasyToDraw syntax, we can complete the drawing declaration of most basic charts, as well as the drawing declaration of more complex charts such as chord diagrams and network diagrams.
- Work content: realize chart-level grammar, component-level grammar and interaction-level grammar design, based on React and ES6 to complete the front-end interface construction and grammar analysis, use JsonEditor to implement grammar input, use SVG to complete the bottom chart drawing.

Industrial Economics Visualization (modular, engineering)

Aug 2021 - Nov 2021

- Project Description: The project is based on BACI's multi-industry trade data, providing MapTriX view for trade flow data analysis, force-oriented view for import and export structure analysis, radar map and thermal map for comparative analysis, and global dynamic view to show the years of trade data changes and other multi-dimensional data analysis.
- Work content: MapTriX view layout algorithm implementation, component development based on **React hook Typescript, husky** and **lint-staged** tools environment construction, assist in using redux to realize global state management
- Work Results: The output paper is planned to be submitted to **TCSS** and the analysis system is open source.

Student work

The squad leader

Aug 2018 - Jul 2021

- Work content: participate in grade meetings and assist grade management; Organize regular class meetings to convey the spirit of the college; Assist in the development of group day activities
- During his tenure, the class won 4 collective honors, "Advanced Class Collective", "Advanced League Branch", "May 4th Elegance Competition Winning Award", "CC Academy Games Second Prize"

SKILLS, CERTIFICATIONS & OTHERS

- **Other skills:** Illustrator,PR,PS,Node.js
- **Language ability:** CET-6 (freshman passed)