


# Wayne | Frontend Developer

 wonjun92@gmail.com

 <https://waynechoi.dev>

 <https://github.com/waynechoidev>

## PROFILE

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As a frontend developer at a FinTech startup, I have been at the helm of our core product, guiding it from conceptualization to launch while managing its high complexity. My focus is on developing with a deep understanding of the entire business landscape.

Additionally, I have a strong interest in graphic programming across various platforms, from native to web. I actively pursue this passion through hands-on projects, continuously learning and experimenting with new techniques to enhance my skills.

## EXPERIENCE

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### Frontend Developer

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Aug 2022 – Present

- Key Responsibilities:
  - Led the development and lifecycle management of frontend systems for B2B and B2C FinTech projects.
  - Designed and drove the integration of frontend and backend contracts.
  - Improved UI design and tackled complex business logic, focusing on performance optimization.
- Processes & Technologies:
  - Utilized React for frontend development and optimization.
  - Developed and implemented a custom testing system, transitioning to an E2E testing strategy.
  - Managed complex state and business logic handling.
- Key Achievements:
  - Enhanced testing efficiency by developing a customized testing library and transitioning from manual to automated testing.
  - Spearheaded API design and integration, optimizing database queries to enhance performance.
  - Actively participated in backend development, leading the design and implementation of key features to meet business and data processing requirements.

### Boat Builder

Rayglass Boats

Yachting Development

Aug 2016 – Aug 2022

- **Custom Yacht Development:** Worked directly with clients to design and build custom yachts, enhancing communication and client interaction skills.
- **Problem Solving & Debugging:** Addressed and resolved complex engineering and electrical issues during yacht construction, applying strong problem-solving abilities.
- **Technical Skills:** Specialized in laminating, assembly, and fit-out for high-performance vessels, including RIBs and super yachts.

## SIDE PROJECTS

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### PBR Renderer

- Implemented PBR material shaders and optimized rendering performance across WebGL, WebGPU, and OpenGL platforms
- Developed custom shader programs and optimized rendering techniques to create realistic material effects
- Created comprehensive documentation and sample projects to showcase the PBR engine's capabilities and usage
- Link: <https://waynechoi.dev/post/pbr-rendering>

### N-body Simulation

- Implemented an N-body particle system using WebGPU
- Designed and implemented custom compute shaders for force calculations, optimizing performance for real-time applications
- Addressed performance bottlenecks on various platforms through iterative optimization
- Link: <https://waynechoi.dev/post/n-body-problem>

### SPH Simulation

- Implemented a Smoothed Particle Hydrodynamics (SPH) simulation using WebGPU with 2,000 particles
- Based on the paper "[Particle-Based Fluid Simulation for Interactive Applications](#)"
- Link: <https://waynechoi.dev/post/sph-water>

## EDUCATION

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### Manukau Institute of Technology

Diploma, Computer Integrated Manufacturing  
2015 - 2016

### Unitec Institute of Technology

Certificate in Applied Technology in Boatbuilding  
2012 - 2013

## SKILLS

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HTML5 / CSS3

JS / TS

React.js

Node.js

C++

OpenGL

WebGL

WebGPU