

Mark Melnik

markymelnik@gmail.com | [linkedin.com/in/markmelnik](https://www.linkedin.com/in/markmelnik) | github.com/markymelnik | <https://markmelnik.com>

TECHNICAL SKILLS

Languages: JavaScript (ES6+), TypeScript, Java, SQL (Postgres), HTML, CSS, Sass

Frameworks/Libraries: React, Redux, React Query, NodeJS, Express, Spring, Astro

Tools/Technologies: Git, ESLint, Vite, REST APIs, JWT, Docker, AWS (S3, EC2, Lambda), WebSockets, CI/CD

PROJECTS

BallerBlitz | *TypeScript, React, React Query, NodeJS, Express, PostgreSQL, Sass* Demo | Source

- Developed a full-stack basketball app; users can forecast game outcomes, track stats, and connect with friends
- Established a data pipeline in Express to fetch, transform, and serve live scoreboard data to the React frontend
- Implemented JWT auth with refresh/access tokens and WebSocket email verification following OWASP guidelines
- Created 30+ RESTful endpoints for handling user authentication, game predictions, and friend interactions
- Enhanced frontend architecture with code-splitting, lazy loading, higher-order components, and React Portals
- Incorporated GitHub Actions workflow for CI/CD with feature branching and PRs, to build and deploy to Render

FitFinder | *TypeScript, React, Redux, Java, Spring, PostgreSQL, Sass, Docker* Demo | Source

- Developed a full-stack fitness location app; users can browse categorized fitness locations and save favorites
- Designed an accessible, responsive and mobile-first UI with React and Sass with modular/reusable components
- Leveraged Redux for clear and efficient state management, improving interactivity and code management
- Built a RESTful Java Spring API with CRUD, filtered search on an ORM schema; dockerized for deployment
- Integrated street map using OpenStreetMap/Mapbox API with location markers based on geospatial coordinates

Portfolio | *TypeScript, React, Astro, Sass* Demo | Source

- Developed an elegant, single-page portfolio site showcasing projects and a personal profile, designed with Figma
- Leveraged the Intersection Observer API for scroll navigation and CSS keyframes, animations, and transitions
- Optimized page loads times using Astro's server-side rendering and partial hydration capabilities

Battleship | *JavaScript, HTML, CSS, Jest* Demo | Source

- Recreated the game of Battleship using only vanilla JavaScript, HTML, CSS, with an emphasis on modular code
- Prioritized test-driven development by writing comprehensive Jest unit tests ahead of feature implementation
- Integrated the Drag and Drop API with sequential visual feedback to enhance user experience

EXPERIENCE

Binghamton University Residential Life August 2019 – May 2022

Resident Assistant (Senior Mentor) Binghamton, NY

- Managed the social and academic development of over 25 residents by counseling them on a weekly basis
- Supported residents in overcoming challenges related to mental health, discrimination, and language barriers
- Mentored new resident assistants on role expectations and conflict resolution, fostering a positive work culture

Movement Disorders Laboratory (Parkinson's Disease) November 2020 – August 2021

Undergraduate Researcher Binghamton, NY

- Investigated neuroplasticity in dopaminergic and serotonergic systems and their effect on Parkinson's Disease
- Devised and executed a research methodology using a rat model to improve existing pharmaceutical therapies
- Coordinated time-sensitive procedures for accurate data collection and subsequent processing using SPSS
- Presented research findings to Binghamton University research faculty at an annual poster conference

EDUCATION

Binghamton University Binghamton, NY

Bachelor of Science in Neuroscience, Minor in Russian Studies, 3.91 August 2018 – May 2022