



Simon Vega

Software Engineer Intern - C# .NET Desktop

☎ (847) 555-0186 ✉ simon.vega.cs@example.com

🌐 linkedin.com/example/simonvega 📍 Evanston, IL 60201

STRENGTHS



Desktop interface judgment

During market-data prototypes, clearer status cues made recovery easier for reviewers. Feedback became a practical design input.



Testing discipline

A replay harness exposed sequencing defects before demos. That experience made failure cases part of each design conversation.



Team communication

Faculty and peers often asked for design rationale. Short presentations helped turn technical tradeoffs into shared decisions.



Analytical problem solving

When event timing caused confusing screens, tracing queues and state changes revealed a cleaner separation of responsibilities.



Adaptable learner

Moving from coursework into supervised research brought unfamiliar market workflows. Curiosity and feedback quickly shaped useful contributions.

SKILLS

C# .NET Framework WPF

WinForms Git NUnit Unit testing

Integration testing

Object-oriented programming

Design patterns MVVM

SUMMARY

Computer Science student with nearly two years of supervised research and project experience building C# .NET desktop applications for real-time, data-intensive workflows. Brings hands-on work across WPF, WinForms, MVVM, **object-oriented programming**, design patterns, Git, NUnit, unit testing, and **integration testing**. Built interfaces that display simulated market data, order states, alerts, and connection health, then improved usability through clearer feedback and recovery paths. A 3.72 **major GPA** reflects a strong base in algorithms, concurrency, data structures, and analytical problem solving. Enjoys working closely with technical teammates, presenting design choices, and learning from user needs. Ready to contribute during a 10-week Agile/Scrum internship with Traders, Quants, and **Software Engineers** while growing through feedback, training, and hands-on ownership.

EDUCATION

Bachelor's Degree in Computer Science

Northwestern University 🎓 GPA: 3.72 📅 2028 📍 Evanston, IL

Coursework: *C# programming, .NET application development, object-oriented programming, algorithms and data structures, software testing*

TECHNICAL SKILLS

- **Programming Languages:** C#, object-oriented programming, interfaces
- **Desktop Frameworks:** .NET Framework, WPF, WinForms
- **Architecture Patterns:** MVVM, observer pattern, factory pattern
- **Testing Frameworks:** NUnit, unit testing, integration testing
- **Version Control:** Git, feature branches, pull requests
- **Software Design:** Encapsulation, inheritance, dependency injection
- **Real-Time Systems:** Event queues, message replay, connection health
- **Trading Interfaces:** Option quotes, order states, risk-limit alerts
- **Development Practices:** Agile, Scrum, code reviews
- **Quality Engineering:** End-to-end testing, test scenarios, defect tracing
- **Data Structures:** Algorithms, concurrency, timestamped messages

EXPERIENCE

C# .NET Software Engineering Research Assistant

University Market Systems Lab 📅 September 2025 - Present 📍 Evanston, IL

Supports a faculty-supervised market-systems study through **WPF** desktop development, simulated quote workflows, test automation, and team design reviews. Owns interface and reliability improvements that help researchers inspect real-time behavior with clearer feedback and repeatable validation.

- Developed a **C# .NET WPF desktop** prototype showing simulated option quotes, order states, and connection health for market-systems research.
- Applied **MVVM**, observer, and factory patterns to separate interface behavior from pricing-feed simulation, simplifying reviews and future changes.
- Built **NUnit** unit tests for quote validation, order-state transitions, and stale-data handling, then documented gaps for weekly lab decisions.
- Created an integration-test harness replaying 50,000 timestamped messages, exposing sequencing defects before faculty demonstrations.
- Used **Git** feature branches, pull requests, and concise design notes across a four-person research team, keeping changes visible and reviewable.
- Presented latency findings and usability observations to faculty and six student researchers, leading to clearer status indicators and a simpler recovery workflow.

[Debugging](#) [Data structures](#)

[Algorithms](#) [Agile/Scrum](#)

LANGUAGES

English Native

Spanish Proficient

MY CAREER



- C# .NET Software Engineering Research Assistant at University Market Systems Lab (11 Months)
- C# .NET Desktop Software Engineering Project at Northwestern University Capstone (7 Months)
- C# .NET Application Development Student at Northwestern University Student Lab (3 Months)

C# .NET Desktop Software Engineering Project

Northwestern University Capstone 📅 January 2025 - August 2025 📍 Evanston, IL

Worked on a supervised five-person capstone team building a WinForms interface for simulated market activity. Contributed application structure, event handling, testing, source control, and user-focused revisions that made demonstrations easier to follow under volatile scenarios.

- Designed a **WinForms** application for monitoring simulated equities, order tickets, and risk-limit alerts during volatile test scenarios.
- Implemented **C#** classes for quote normalization, command handling, and validation with encapsulation, interfaces, and **dependency injection**.
- Created a responsive update queue that separated market-feed events from interface rendering during replay of 12,000 events.
- Authored NUnit and end-to-end tests for invalid orders, disconnected feeds, duplicate messages, and boundary values, catching failure paths early.
- Managed Git history through issue-linked commits, code reviews, and release tags that supported milestone grading and final evaluation.
- Presented the application to a faculty panel, then converted feedback into keyboard shortcuts, clearer error messages, and a consolidated activity view.

C# .NET Application Development Student

Northwestern University Student Lab 📅 September 2024 - December 2024 📍 Evanston, IL

Completed supervised desktop application work in an object-oriented design course, with focus on reusable **C# .NET** components, **WPF** interaction patterns, local data handling, and test-driven review. Delivered a documented application while learning how architecture choices affect maintainability and user response.

- Built a C# .NET WPF inventory-monitoring application with reusable components and maintainable **desktop** interaction patterns.
- Modeled domain objects with interfaces, inheritance, and the strategy pattern, supporting multiple alert rules without duplicated logic.
- Connected interface behavior with a local data service and validated incomplete records, malformed inputs, and unavailable data conditions.
- Wrote NUnit tests for core services and evaluated functional behavior across 38 instructor-provided scenarios.
- Maintained Git branches, clear commit messages, and a README covering setup, architecture, and known limitations.
- Presented design tradeoffs and a live demonstration to 24 students, incorporating peer feedback into the final interface and technical report.

PROJECTS

Market Data Workflow Simulator 📅 2025

Built a separate C# desktop simulator that modeled quote updates, order states, and connection events. Focused on readable operator feedback, event sequencing, and testable boundaries so users could review market-style workflows without live trading access.

Desktop Resilience Test Harness 📅 2025

Created a replay-focused test utility for timestamped messages, disconnected feeds, duplicate events, and stale data. Clear failure output helped student developers trace defects and discuss recovery choices during technical reviews.

LEADERSHIP & AWARDS

- Dean's List, Northwestern University - Fall 2025
- Computer Science Department Undergraduate Research Scholarship - 2025
- Capstone Design Showcase, Best User Interface Demonstration - 2025

CERTIFICATIONS

- Microsoft Learn: Build .NET Applications with C# 📅 2026
- Microsoft Learn: WPF Desktop Application Development Fundamentals 📅 2026

PROFESSIONAL AFFILIATIONS

- Student Lead, Northwestern Software Design Study Group - 2025 - Present
- Member, Association for Computing Machinery Student Chapter - 2024 - Present

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST