

# Nick Seguin

*Full Stack Software Developer*  
*nseguin42@gmail.com*

## Skills

- End-to-end app and library development with the .NET stack: C#, SQL Server, Azure services, etc.
- Systems administration (Windows and Linux), IT support
- Data analysis, business analytics and reporting, data visualization
- Solution/domain oriented design, object-oriented and functional programming, standard design patterns and anti-patterns
- CI/CD, DevOps, and Infrastructure as Code methodologies / tools
- Integration and unit testing, test automation
- Cloud-native tools and distributed systems
- Rigorous problem solving, mathematical reasoning and abstraction with clear, structured articulation

## Education

2019-2022 **M.Sc. Mathematics**, *University of Iowa*, Iowa City, IA

2016-2019 **B.Sc. Mathematics**, *Florida Gulf Coast University*, Fort Myers, FL  
*graduated magna cum laude*

## Experience

2022–2024 **Software Developer**, *O'Rourke Sales Company*, Davenport, IA

*Full stack .NET developer and primary software development resource.*

Individually responsible for designing, implementing, deploying, and maintaining solutions from a wide variety of domains:

- ASP.NET Core MVC web apps and RESTful APIs for both internal and B2B consumption;
- relational OLAP routines for custom reporting and internal analytics with SQL Server, SSRS, and custom reporting software;
- a suite of Node.JS workflows for JetBrains YouTrack to support an in-house IT ticketing platform;
- third-party integrations via REST and SOAP APIs.

Primary driver for a modernization and code quality initiative:

- coordinated the migration of legacy applications from .NET Framework 4 to .NET 6 (and later to .NET 8);
- developed libraries providing abstractions over our infrastructure to accelerate the development of loosely-coupled applications;
- designed and implemented an Infrastructure as Code SDLC with declarative configuration and containerized applications;
- developed and maintained a collection of Azure Pipelines to support complex build orchestration and deployment tasks on Azure DevOps Server.

*Davenport, IA (open to remote/relocation)*

☎ (561) 602-8470 • ✉ [nseguin42@gmail.com](mailto:nseguin42@gmail.com) • 🌐 [nseguin.dev](https://nseguin.dev)  
in [nseguin42](#) • 🔄 [nseguin42](#)

2019-2022 **Graduate Teaching Assistant**, *University of Iowa*, Iowa City, IA

- Completed Ph.D coursework and passed qualifying exams in analysis, algebra, and topology.
- Co-authored “*An incompatibility between spectrification and the Szabo spectral sequence*” with B. Cooper and P. Paul [2]. Used computational tools like [SageMath](#) (Python), [CHomP](#), and [knotkit](#) (C++) to compute homological knot invariants in a data-driven approach to an open question in algebraic topology.
- Primary instructor for undergraduate math classes ranging from intermediate algebra to multivariable calculus for engineers. I helped manage the transition to/from remote instruction during the COVID-19 pandemic.
- Tutored on an individual basis for all classes in the Mathematics Tutorial Lab.

2018-2019 **Researcher**, *Florida Gulf Coast University*, Fort Myers, FL

In 2018, received the [Seidler undergraduate research fellowship](#) and spent the summer conducting original research in complex analysis and linear algebra. Along with A. Condori and C. Brooks, co-authored “*Polynomially Isometric Matrices in Low Dimensions*” [1] which was accepted for publication in 2019. Used computational software (Maple, Python) to help us explore the qualitative behavior of matrix-valued functions. Presented our findings at FGCU’s [ASPiRE](#) conference.

2017-2019 **Instructional Assistant**, *Florida Gulf Coast University*, Fort Myers, FL

Helped teach and graded for undergraduate math classes ranging from intermediate algebra to advanced calculus. In the Math Department Tutoring Center, tutored on a walk-in basis for every math class offered by the university. Tutored individually for the Department of Athletics.

---

## Publications

- [1] Cara D. Brooks, Alberto A. Condori, and Nicholas Seguin. Polynomially isometric matrices in low dimensions. *The American Mathematical Monthly*, 128(6):513–524, 2021. URL: <https://doi.org/10.1080/00029890.2021.1898872>.
- [2] Benjamin Cooper, Pravakar Paul, and Nicholas Seguin. An incompatibility between spectrification and the szabo spectral sequence, 2021. URL: <https://arxiv.org/abs/2112.09030>.

Davenport, IA (open to remote/relocation)

☎ (561) 602-8470 • ✉ [nseguin42@gmail.com](mailto:nseguin42@gmail.com) • 🌐 [nseguin.dev](https://nseguin.dev)  
in [nseguin42](#) • 🔄 [nseguin42](#)