

# Nicholas Colvin

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## EDUCATION

**University of Texas at Dallas**  
Candidate for Master of Science in Computer Science

Richardson, TX  
December 2023

**University of North Carolina at Chapel Hill**  
Bachelor of Science in Computer Science

Chapel Hill, NC  
May 2020

## WORK EXPERIENCE

### Self-Employed

*Software Developer*

Durham, NC  
fall 2021 - present

- Continued software development work for 4th Vector Technologies after leaving the full-time position to pursue school
- Devised a user-friendly setup tool for Cognex VisionPro scripts, enabling clients to independently configure new products in minutes instead of relying on external assistance, vastly improving efficiency and client satisfaction
- Created a support chat interface between 4VT and clients via the Slack API, significantly reducing response times

### 4th Vector Technologies

*Vision Systems Engineer*

Apex, NC  
summer 2020 - fall 2021

- Built, installed, maintained, and supported software and hardware for ten industrial machine vision systems
- Developed GUIs in C# for the touchscreen HMIs used by operators to improve user experience and efficiency
- Designed custom image processing algorithms using a variety of CPU/GPU programming and commercial software
- Trained part of a deep learning model to classify product anomalies and achieved over 90% precision and recall
- Revamped the company website, integrating Perch CMS, Google Analytics, and Hubspot to improve SEO scores, increase traffic, and enhance lead generation and client engagement
- Communicated with clients to identify needs and translate into tailored software features

### Blue Trading Systems

*Programming Intern*

Chapel Hill, NC  
summer 2018 - fall 2019

- Produced a single-page application for internal use in F# to display software version numbers running on virtual machines along with system and network information
- Deployed a Python web application into a Docker container enabling clients to manage their software instance and plugins, view and filter a live feed of logs, and look up FIX messages

### Lenovo

*Software Engineering Intern*

Morrisville, NC  
summer 2017

- Applied the MVC model in C# to gather data for the homepage of a Windows application
- Wrote unit, integration, and web tests for accessing cloud content within the model
- Learned to work in an agile environment, use project tracking and content management software, and relay progress in daily team meetings

## PROJECT EXPERIENCE

*Predicting NFL Scores using Sportsbook Odds*

fall 2022

- Implemented a multilayer perceptron in Python and compared performance with an MLPRegressor from scikit-learn
- Organized a database found online with opening and closing odds from every NFL game since 2007
- Evaluated the significance of features by removing them from the dataset and comparing summary statistics over ten instances of each model

*OdderJobs*

fall 2019

- Led the development of a job board to find or post local odd jobs as a group project using JavaScript and Bulma
- Provided separate public, private, and user data stores to secure and organize data

## SKILLS

*Programming Languages:* C#, Python, Java, C, JavaScript, F#

*Tools and Frameworks:* .NET Core and Framework, NumPy, scikit-learn, TensorFlow, PyTorch, JUnit, React, Axios