Gabriel Linares

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Education

University of North Carolina Charlotte, NC

Bachelor of Science in Computer Science *Graduation: May 2026*

- Software, Systems and Networks
- Statistics Minor

Relevant Coursework

- Intro to Cloud Computing for Data Analysis (Enrolled)
- Intro to Natural Language Processing (Enrolled)
- Intro to Data Mining (Enrolled)
- Predictive Analytics (Enrolled)
- Intro to Machine Learning
- Applied Regression Analysis
- Multivariate Calculus (Calculus 3)

Projects

Motorshift Connection | *Node.js, MongoDB, JavaScript, HTML/CSS*

- Developed a motorsports events platform where users can create accounts, manage their profiles and join or host events.
- Built backend with Node.js + Express.js (MVC) and MongoDB (Mongoose) to support user accounts, events, and media uploads.
- Built reusable Mongoose schemas for users and events, for scalability.
- Secured application with input validation/sanitation, user authentication, resource authorization, and request rate limiting to protect against common web vulnerabilities.
- Designed a responsive user interface with HTML/CSS, ensuring clean UX.

Parallel Graph Web Crawler | *C++, RapidJSON, CURL*

- This program is implemented by using a Breadth-First Search algorithm that makes continuous requests with the use of CURL to a service URL given a specific depth to crawl.
- This program receives JSON format responses which are parsed internally by the use RapidJSON.
- Achieved a speedup above 5x the sequential version by implementing parallel worker threads in a thread-pool through means of a blocking-Queue.

Parallel N-Body Simulation (In-Progress) | *C++, CUDA*

- Created a program that simulates particle/body interactions by calculating their respective 3-dimensional force, acceleration, and position vectors.
- Implemented particle initialization from a parameter file and initialization from random parameters generated from uniform distributions.
- Assessed dependencies in order to extract efficient parallelism from the sequential version.
- Implemented parallelization of Force, Acceleration and Position computations by means CUDA Kernels for benchmarking on GPUs.

Experience

Aerospace Composites Technician July 2021 – March 2023

Tiger Precision Products *Mooresville, NC*

- Performed the Lay-up of carbon fiber parts into designated molds
- Conducted Resin Infusion and curing of parts using appropriate machine parameters for each part configuration
- Collaborated with Process Engineers in addressing reoccurring difficulties during parts production
- Clearly documented any quality flaws throughout the de-molding process of components

Maintenance Technician (BlowMolding Specialized) March 2018 – July 2021

Niagara Bottling *Mooresville, NC*

- Assess and troubleshoot Pneumatic, Mechanical, and Electrical Blow-molding systems during production
- Conducted production line shut-down for weekly preventative maintenance
- Collaborated with Senior Mechanics troubleshooting reoccurring problems and process optimization

Technical Skills

Languages: C++ (Most Proficient), Python, C, Java, SQL(Postgres), JavaScript, HTML, CSS
Frameworks/Libraries: NumPy, Pandas, Scikit-learn, TensorFLow, SQLAlchemy, FastAPI
Developer Tools: Linux, Visual Studio Code, Git, Postman, Docker
Other Skills: Spanish (native)