Dominic Catania

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Objective

Sophomore Computer Engineering student seeking an internship focused on data-driven systems and emerging technologies. Experienced in transforming system data into actionable insights.

Education

- **Texas A&M University** — College Station, TX
  B.S. Computer Engineering; University Honors; GPA: 3.76 — *Aug 2024 – May 2028*
  - Relevant Coursework: Data Structures & Algorithms; Discrete Structures for Computing; Statistics Principles

Featured Projects

- **Red Light Green Light** — October 2025
  Texas A&M Datathon
  - Designed automated data extraction pipelines using Python and Selenium to analyze dynamic system states
  - Applied rapid experimentation and iteration in a competitive, multidisciplinary environment
- **Vigil** — Jul 2024 - May 2025
  Nolan Catholic High School
  - Built a data-driven web platform to analyze robotics performance metrics and detect anomalies using interactive visualizations and AI-assisted insights
  - Integrated Plotly and Tableau dashboards to support technical decision-making and performance optimization
- **PathGen** — Sep 2024 - Nov 2024
  Aggie Robotics
  - Developed a simulation-based planning tool incorporating physical constraints and system parameters
  - Modeled robot behavior using data-informed assumptions to support design validation and optimization

Leadership Experience

- **Triangle Fraternity** — Oct 2024 - Present
  Recruitment Chair
  - Applied data-driven strategies to design and optimize recruitment pipelines, resulting in 20+ members added
  - Utilized software tools and digital platforms to manage outreach, engagement, and performance metrics
  - Led cross-functional teams and coordinated outreach initiatives requiring analytics and communication
- **FIRST Robotics Competition Team 4206** — Aug 2021 - May 2024
  Team Captain; Driver; Lead Programmer
  - Led a 30+ member robotics team, overseeing project management, system integration, and collaboration
  - Placed 3rd in the World by optimizing performance through data logging and match strategy
  - Applied technical problem-solving, adaptability, and teamwork skills in high-pressure environments
  - Mentored 8 newer members in sensor integration, vision processing, and feedback systems enhancing robot precision
  - Incorporated distance interpolation, auto-aim, autonomous decision-making, full-field localization and pose estimation using inverse kinematics and AprilTag IDs, increasing efficiency by 80%

Achievements

- **FIRST Robotics Championship - World Semifinalists**
- **Reta & HJ Haynes '46 University Scholarship**
- **Datathon Second Place**

Skills

- **Languages**: Python, SQL, R, C++, Java, JS **Technologies**: Tableau, Excel, Django, React, Power BI