Gabriel Amodeo Elbling

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EDUCATION

University of Notre Dame, Notre Dame, IN   May 2024
Bachelor of Science, Computer Science   GPA: 3.7

PROFESSIONAL EXPERIENCE

Grupo Digicon   Porto Alegre, RS, Brazil
  Artificial Intelligence & Machine Learning Engineer Intern   *June 2023 – August 2023*
  - Developed an industry-grade occlusion-aware pose-estimation AI model using PyTorch, *patent-pending* for access control applications worldwide including in Tesla factories, yielding a *10% reduction in fraud incidents*.
  - Created a project-specific custom dataset comprising of over 62k images, achieving 94% accuracy.
  - Pioneered the creation of a high-precision vehicle type detection AI model utilizing PyTorch, achieving a 95% accuracy rate, for the first automated highway toll system in Brazil.
  - Employed ONNX to export deployable and optimized models.

ASML   Veldhoven, Netherlands
  Software Engineer Intern   *June 2022 – August 2022*
  - Developed an "Image Generator" Python module, which creates testing inputs (previously done manually) for a complex image processing algorithm. *Streamlining the software testing pipeline/process by 50%*
  - Built comprehensive "White Box" unit tests for each function and *extensive documentation* (with software design diagrams) for usage and future development.
  - Collaborated closely with an Optics Physics team to implement complex Linear Algebra algorithms using multidimensional matrices through the NumPy framework.
  - Presented and defended design considerations and proposals, project dependencies and results to senior engineers, architects, and managers.

Zeeng – Data Driven Platform   Porto Alegre, RS, Brazil
  Software Developer Intern   *May 2021 – August 2021*
  - Developed multiple data gathering engines using Python and the Scrapy framework.
  - Enabled the switch from *outsourcing to in-house collection of all data* from Brazil's top news media and product review websites.
  - Created extensive databases using the Elasticsearch engine for the storage and quick retrieval of datapoints.

MAJOR PROJECTS

tuchbase.com, *Co-Founder & Lead Software Engineer,* Remote   *June 2023 – Present*
  - Created a full-stack web application using Python, Django and AWS, empowering hotel guests to seamlessly send messages directly to the front desk without sign-ups or personal information.
  - Leveraged JavaScript and WebSockets to establish a dynamic and real-time messaging feature.
  - Spearheading the development of AI chat assistance functionalities and end-to-end translation capabilities.

LEADERSHIP AND ACTIVITIES

Preternship Software Engineer, *Data Structures Project Lead*, Notre Dame, IN   *January 2022 – May 2022*
  - Led a team of three in developing a machine learning algorithm using PyTorch to predict the outcome of NBA games with 67% accuracy.
  - Identified critical tasks, determined project dependencies and roadmap while also delivering weekly code reviews and professional memorandums.

Data Science Club of Notre Dame, *Project Member,* Notre Dame, IN   *September 2021 – January 2022*
  - Developed software that predicts company's LinkedIn post's engagement through follower count, reactions, comments, and hashtag data using machine learning and Python.
  - Collaborated with four other group members and mentored by a Facebook Data Science Manager.
  - Pitched the solution to Facebook associates with the goal of implementing our algorithm into their dataset.

SKILLS: Fluent English/Portuguese and Conventional Spanish/French | Python, C, C++, HTML/CSS/JS, SQL, Linux, GCP, AWS, Git, APIs, NVIDIA Suite

CITIZENSHIPS: Brazil, United Kingdom, Canada, Italy