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Víctor Cabré

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Bachelor's Degree in Informatics Engineering

Barcelona, ES — **Universitat Politècnica de Catalunya (UPC-FIB)** — **Sep 2020 | Jun 2024**

- Acquired a comprehensive understanding of fundamental computer science and informatics engineering principles, and gained a strong foundation in programming languages, data structures, algorithms and software development methodologies.
- Major in Computer Science: During two semesters, I specialized in the following CS-related topics:
  - Artificial Intelligence: Developed programs using Java, PDDL and STRIPS to solve different AI problems in the fields of optimization, knowledge-based systems and automated planning.
  - Machine Learning: Learned data processing, representation and analysis; and machine learning methods to solve a vast array of problems. Linear methods; single layer and multilayer perceptrons; convolutional neural networks for computer vision problems.
  - Algorithmics: Advanced data structures and algorithms. Greedy algorithms, dynamic programming, optimal flow on networks.
  - Logics in Information Technology: Learned an extensive selection of techniques for logic reasoning and computational analysis. Developed a high-performance SAT solver using C++.
  - Programming Languages: Developed an understanding of strategic language selection based on project requirements, scalability and performance considerations.

Copenhagen, DK — **IT University of Copenhagen** — **Aug 2024 | Dec 2024**

Developed my bachelor's thesis "In-depth evaluation of cross-domain language identification methods" under the supervision of assistant professor Rob van der Goot as part of the NLPNorth group.

Employment

Software Engineering Intern — **Vanderlande Industries** — **Feb 2024 | Aug 2024**

- Designed and developed a comprehensive full-stack web application featuring an AI assistant for document and database Q&A, summarization, and rewriting, which increased efficiency in information retrieval processes. Created and maintained the supporting infrastructure for the application.
- Developed and trained neural networks using supervised learning to predict project costs based on project characteristics, significantly improving accuracy over previous methods.

Technical Skills and Languages

- Programming Languages: Python, JavaScript, TypeScript, C++, C#, Java, SQL.
- Git, Linux, Docker, Kubernetes, Azure and AWS. React, Node.js, Next.js, Vue.js, FastAPI.
- Data analysis, data processing and machine learning using Python, Keras, Tensorflow and Pytorch.
- High-performance parallel programming, task and data decomposition using C++ and OpenMP.
- Web scraping and data extraction using Python and Beautiful Soup.
- Languages: English (full professional proficiency); Spanish and Catalan (native proficiency).

Awards

- **Diploma of Excellency** (Fundació Privada Antonio F. Cagigós) Recognized for my academic performance while studying Batxillerat (baccalaureate/high school diploma) at Escola Pàlcam. Awarded to the two best-performing students out of a pool of 100 students. Jul 2020