LAURA GALERA

Barcelona, Spain

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Education

Stockholm University   **Aug. 2022 – June 2023**
M.S. in Artificial Intelligence   *Stockholm, Sweden*
- **Coursework:** *Data Mining in Computer and System Sciences, Principles and Foundations of Artificial Intelligence, Big Data with NoSQL Databases, Empirical Research Methodology for Computer and Systems Sciences, Machine Learning, Scalable and Responsible AI in organizations.*
- **Activities:** Member of Student union DISK.

University of Girona   **Sep. 2018 – June 2022**
B.S. in Computer Science (International mention)   *Girona, Spain*
- **Coursework:** *Calculus, Algebra, Logic and discrete mathematics, Physics and electronics, Statistics, Data structures and algorithms, Digital systems, Databases, Software engineering, Operating systems, Networks, Multimedia and UI, Computation theory, Computer architecture, Declarative programming, Artificial Intelligence, Robotics, Computer graphics, Compilers, Numerical computation, Cryptography.*
- **Average grade:** 9.37/10; top 1% of the department. 21/33 distinctions.
- **Activities:** Mentor of Computer Science degree. Member of FEMenGIN.

Experience

Spotify   **Feb. 2023 – June 2023**
Research Assistant   *Stockholm, Sweden*
- Conducted research in Explainable Artificial Intelligence based on interpretable ranking generalized additive models.
- Explored techniques for adapting Local Interpretable Model-agnostic Explanations to ranking problems.
- Compared different approximations of LIME for ranking to ascertain their accuracy and applicability.

University of California, Irvine   **Feb. 2022 – July 2022**
Research Assistant   *California, US*
- Built deep learning models to classify biomedical images.
- Conducted my Bachelor Thesis "Detecting colorectal polyps in colonoscopy: What can deep learning do?".

Additio   **June 2021 – Sep. 2021**
Data Scientist   *Girona, Spain*
- Performed clustering methods to report groups of students with similar learning weaknesses and recommend personalized tasks from Additio's resource bank.
- Analyzed features within students in the same cluster to provide an explanation via text.
- Designed a website using Flask to retrieve and filter data from an Elasticsearch database and visualize the model's output.

Projectes COM-TECH S.L.   **June 2017 – Aug. 2017**
Junior Front End Developer   *Girona, Spain*
- Assisted in developing the front end of a website for a concessionaire.
- Utilized JavaScript, HTML and CSS to create and design dynamic websites.

Projects

Detecting colorectal polyps in colonoscopy: What can deep learning do? | *Python*   **June 2022**
- Developed a pipeline to clean and pre-process a data set of 2,000 colonoscopy images from UCI's center containing polyps and non-polyps.
- Built a convolutional neural network to classify polyp images; evaluated its performance with two optimizers: Gradient Descent (SGD), and Adam.
- Analyzed mechanisms to reduce overfitting; early stopping, regularization, data augmentation, transfer learning.
- Created an ensemble model to detect polyps in colonoscopy images combining three pre-trained architectures –VGG, ResNet, DenseNet– with an accuracy of 96%.

Functional dysphonia disease detection from speech signals | *Python*   **November 2021**
- Cleaned a data set of 24.681 voice audios collected by Universität des Saarlandes.
- Implemented feature extraction on audio signals using Mel-Frequency Cepstral Coefficients, and Energy.
- Applied k-nearest neighbors and Support vector machine to predict Functional dysphonia disease among patients.

Unipop, app to exchange used goods | *Android, Java, Spring, MongoDB, JIRA, Firebase*   **June 2021**
- Created an Android application using Java and Android Studio to sell and buy second-hand products.
- Implemented an API REST to process queries in the back-end of the app; deployed API REST with Postman.
- Worked with Google Firebase to build a real-time chat application.

Technical Skills

Languages: Python, R, Prolog, Haskell, Scala, Minizinc, Java, JavaFX, C, C++, HTML/CSS, JavaScript, SQL, Cypher, Bash, ANTLR, Android, PHP, MATLAB.

Technologies/Frameworks: Linux, Hadoop, MapReduce, Neo4j, Git, Android Studio, Spring, MongoDB, Elasticsearch, LaTeX.

Certificates

2023   **Neo4j Certified Professional** | *Neo4j*
Certificate ID: 4bbe6414-788d-4ca7-854c-0c938f80a26f.

Scholarships & Awards

2023   **Best Thesis in Informatics** | *Patronat UdG*
Awarded to the best bachelor's thesis in Informatics.

2023   **Bachelor's Degree Extraordinary Award** | *University of Girona*
Awarded to the highest GPA in Computer Science. 56 graduate students.

2022   **Beca Josep Maria Ginés i Pous** | *Patronat UdG*
Awarded to 2 engineering students to pursue a graduate degree in a foreign university.

2022   **Balsells Mobility Award** | *Balsells Fellowship*
Awarded to 7 Catalan engineering students to conduct their thesis at the University of California, Irvine.

2018   **High School with Honors** | *I.N.S. Pla de l'Estany*
Awarded to the best academic transcript of 2018 promotion.

2015   **Ficcions** | *AMIC*
Awarded to the best written story. More than 2,400 participants.

Languages

Spanish & Catalan: Native.

English: C1 Advanced, University of Cambridge. *Issued Sep 2021.* No Expiration Date. Credential ID B6541238.