## Cosmin Serdean

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# Education

## 2019 - 2022 The University of Manchester, Manchester United Kingdom

# BSc Computer Science and Mathematics (Hons)

1st Year: First Class (expected)

#### Relevant modules:

- First Year Team Project: led a team to design and build a web app, using modern technologies: TypeScript, React, NextJS; used the GitLab issue tracker to implement an Agile workflow; we were awarded a first-class mark
- Data Science: introduction to classical statistics, Bayesian reasoning, data exploration, data visualisation and machine learning (naïve Bayes, linear and logistic regression)
- Programming 1 & 2: foundations of programming and data structures using Java and Python
- Advanced mathematics modules: Calculus and Vectors, Calculus and Applications Linear Algebra, Foundations of Pure Mathematics

#### 2016 - 2017 Academy+Plus

Completed a programming bootcamp focused on low-level programming using the C programming language.

Learnt the concepts of Linux and other UNIX based operating systems, data structures and algorithms.

Implemented a general-purpose standard library 'stdlib' clone that included advanced functions like 'printf'.

# Experience

# 2017 - 2018 Fullstack engineer, Lola Tech, Romania

Participated in the team that architected and built the client-facing ticketing system of a major US-based airline.

Built complex user interfaces using React and NextJS and a GraphQL API using ExpressJS and MongoDB.

Worked in an Agile environment, using modern development practices, for instance, Continous Delivery using Jenkins.

Volunteered to organise a workshop that introduced new technologies to my colleagues.

## 2017 Code Camp

Held a technical presentation regarding NextJS to a big audience at the largest technology conference in my country.

Mentored a software development workshop for beginners regarding NodeJS.

# Side projects

#### **PJControl**

Developed with a course colleague a desktop app that allows control and monitoring of professional Audio-Video setups comprised of hundreds of video projectors.

Designed and developed a complex, yet intuitive user interface using ElectronJS and React.

Set up a Continous Delivery and Code Quality Assurance system using Github Actions.

### Gem gem.cserdean.com

Designed, built and deployed a service for managing bookmarks. The service features a web app built with React and GraphQL, a desktop app built with ElectronJS and mobile app built with Flutter.

Managed the required Amazon Web Services infrastructure.

## **Machine Learning experiments**

Developed a LSTM neural network using PyTorch and trained it to predict the sentiment of sentences from the Rotten Tomatoes movie reviews dataset.

Developed a Variational Autoencoder that upscales the resolution of images from the MNIST Handwritten Digit Database.

## Technical skills

- Broad JavaScript experience using technologies like React, Redux, React Native, NextJS, Svelte, NodeJS, ExpressJS, GraphQL, ElectronJS, TypeScript
- Hybrid mobile development using Dart and Flutter
- Machine Learning using Python and libraries like PyTorch, Keras, ScikitLearn, Pandas; Kaggle contests competitor
- SQL, NoSQL (MongoDB), Unit and Testing, GoLang, C, UNIX, Git version control system
- Amazon Web Services and Google Cloud
- UI and UX Design knowledge using Sketch and Figma

# Soft skills

Languages: advanced English speaker (IELTS overall band 8); native Romanian speaker.

Excellent communication and collaboration skills, demonstrated by the many completed projects, both in professional and informal environments.