# Kevin Nguyen

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## Personal Profile

**Past:** As a recent Electronic and Electrical engineering graduate from Brunel University with a passion for problem solving, I was drawn to programming due to my final year project which involved creating a convolutional neural network to determine the probability of an image being a deepfake. This was my entry point into software development as I utilised Python, in order to come up with a solution despite having no prior experience. In turn I undertook a data engineering training program to develop my understanding of coding to manipulate and handle data.

**Present:** With a growth mind-set and continuous learning attitude, I decided to enrol into a software development boot camp, covering JavaScript, Python, HTML5, CSS and MySQL. Nurturing my programming skills to not only handle data in the backend but also build up a full stack application, and continue to solve problems with code.

**Future:** I am looking to join an organisation that values my skills and expertise, where I can contribute effectively to the team's success, while also allowing me to amass a richer understanding of the broad space that is software development.

## Education and IT Training

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| **10/23-Present** | **Just IT Training Ltd, London**<br>**Digital Skills Bootcamp: Software Development**<br>Twelve week intensive boot camp covering the fundamentals of Web and Software development. |
| **07/22-12/22** | **Sigma Labs, London** |

- Software & Data Engineering Programme: coding individually and as part of an agile team, covering:
  - Coding: Python, JavaScript, OOP, HTML/CSS, Clean Code, TDD, Git;
  - Backend: Flask, PostgreSQL, SQLite, 3NF, API development, security fundamentals,;
  - Data Science: Python, Pandas, regression modelling, statistical significance;
  - Data Eng: Kafka, Spark, ETL pipelines, stream processing, queues, data cleaning;
  - Visualisation, Matplotlib, Plotly, Dashboarding using Dash, Tableau;
  - ML: NLP, Fuzzy Matching, NER;
  - Cloud: Docker, AWS, EC2, Lambda.
- Professional high performance: decision-making frameworks, business fundamentals & effective communication.
- Worked across four industry-standard technical case studies involving ETL, data analysis, machine learning, cloud and data visualisation

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| **09/18-06/21** | **University of Brunel, London**<br>**BEng (Hons) Electrical and Electronic Engineering, 2:1** |
| **Core Modules:** | Advanced Electronics, Embedded Systems, Design of Intelligent Systems, Digital Communication Systems |
| **Languages:** | C++, Python, MATLAB, Assembly |
| **Final Year Project:** | *Deepfake Detection – Implemented a convolutional neural network in Python, using Tensorflow, Pandas, Matplotlib to determine probability of image being a deepfake* |

| 09/16-06/18 | **Mossbourne Community Academy Sixth Form, London** |
| **A Level:** | Maths (A), Physics (B), Chemistry (B) |

| 09/11-06/16 | **Mossbourne Community Academy, London** |
| **GCSE:** | Maths (A*), English Language (B), 9 A* to A |

## IT Skills

**Software Development Skills:** Agile Methodology, Database Normalisation (3NF), Security fundamentals, Object Oriented Programming,
**Web Technology:** AWS, PSQL, Git, Pandas, Tensorflow, Matplotlib, Dash, Bootstrap, Kafka, Docker, Flask
**Core Programming Languages:** Python, JavaScript, HTML5, CSS, SQL

## Projects:

**Deleton:**
- **Project involving taking live cycling data from users, and processing/cleaning to output onto a dashboard as well as storing into a database/API for future access**
- Used AWS services: EC2, Lambda, SES, and Aurora, following the ETL format (Extract, Transform, Load).
- Utilised libraries and dependencies such as Pandas, Confluent Kafka, SQLAlchemy, Boto3, numpy, plotly.express, Dash, and Dash Bootstrap.
- Developed four deliverables: 24-hour report presented to the CEO, an API for accessing historical rides and users, a live dashboard displaying current bike rides, and an additional 12-hour report.

**Deepfake Detection:**
- **Developing a convolutional neural network to classify with a probability whether an image is a deepfake**
- Researched existing models for image classification relating to deepfake detection, as well as machine learning models from scientific journals- using Tensorflow library to develop a solution.
- Implemented existing solutions in python using a convolutional neural network, with a classification accuracy of 77%.
- Investigated the effect of varying parameters, leading to a 14% increase in accuracy for a final 91% accuracy.

**Flight Information Checker:**
- **Developing a full stack application to get flight information from an API and displaying on a webpage**
- Used Python to fetch data from a flight and weather API, then creating a new API containing flight details as well as weather at destination
- Implemented frontend web page using CSS, HTML5 and bootstrap that allows users to search for any airport in the world, returning a table containing flight details, delays, and weather
- Utilised JavaScript to fetch data from manually created API and created table for users to view flight details

## Employment History

| 02/23-05/23 | **Sigma Labs, London** |
| | **Coding Coach Assistant** |

- Verified student quiz answers were correct and final score was accurate
- Performed code reviews through pull requests on github for all students, ensuring clean coding practices were followed
- Established student progress with weekly coding projects, by reading through code and running to check which deliverables were completed

## Interests and Achievements

**Computing:**
- Regularly use Codecademy to develop python and computer science skills, supplementing learning at bootcamps
- Building PCs recreationally for myself, family and friends
- Building Keyboards recreationally for myself, family and friends
- Took part in Mark Evison Challenge, where I developed a smart rover that could be controlled remotely via Bluetooth
- Currently working on deploying projects mentioned to cloud to allow public access to projects without running locally

**Hobbies:** Photography, Videography, Driving, Gaming

**Additional Info:**
- Placed third in regional Jack Petchey Speak Out Challenge
- Participated in Shroders business mentoring programme
- Completed the Bronze Duke of Edinburgh award

**References available upon request**