Padmanaba Srinivasan

https://dangerbot3pic.github.io

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EDUCATION

Imperial College London
Doctor of Philosophy (PhD); Machine Learning

London, United Kingdom
Oct. 2020 - Present

Imperial College London
Master of Engineering (MEng); Electronic and Information Engineering; First-class Honours

London, United Kingdom
Oct. 2016 - Jun. 2020

Pitsford School
A-Level Mathematics, Physics, Further Mathematics, Chemistry; 2A*, 2A

Northampton, United Kingdom
Sep. 2014 - Jul. 2016

EXPERIENCE

Infosys
Research Intern · Infosys Tennis Platform

London, United Kingdom
Jan. 2021 - Sep. 2021

- **Stroke Classification in Tennis**
  Developed a novel pipeline to perform robust stroke classification in Tennis from broadcast video. Work titled "The Path to GOAT-ness: Classifying Tennis Strokes" accepted to MathSport International Conference 2022 as a paper and presentation.
- **Player Imitation**
  Developed novel method to model professional tennis player styles, performing simulatenous learning of styles for all players. Paper titled "Thinking the GOAT: Imitating Tennis Styles" accepted to Sloan Sports Conference 2023 as a presentation and finalist in the Research Paper Competition.

Credit Suisse
Software Engineer · DTS

London, United Kingdom
Apr. 2019 - Sep. 2019

- **AI Assistant**
  Developed a chatbot using NLP to improve the customer service experience and reduce the number of engineers assigned daily to helping customers. Used Word2Vec and Starspace for embedding and classifying sentences and developed two assistants around this: one to directly help customers via a messaging portal, and another to be used by teams to automate tasks. Received offer for full time position.
- **Integrate Modern Team Working Tools**
  Integrated features that enable project owners to use modern collaborative working tools, such as Rocket.Chat. Enabled users on team channels to obtain help from or provide instructions to the team assistant. Released these features to a select number of teams, with control over which teams were allowed to use this pilot scheme and with the ability to disable this feature using feature flags.
- **Trader AI Assistant**
  Led other interns to develop an AI assistant for use by traders. The assistant was designed to be able to automate tasks and, on completion, was presented to heads of various trading desks. Project received favourable feedback and was open sourced internally to enable further team specific development.

Cybersecurity Firm
Cybersecurity Intern · Various Teams

Cheltenham, United Kingdom
Jul. 2018 - Sep. 2018

- **Proprietary Image Viewer**
  Developed an image viewer for a proprietary image format. Used Windows C libraries and designed measures for secure programming, ensuring that invalid files would not lead to program crash.
- **Penetration Testing**
  Trained in penetration testing both software and hardare, in addition to secure coding principles and reverse engineering. Trained in Windows Internals by Alex Ionescu, with a focus on exploiting security vulnerabilities.
- **Secure Communications**
  Worked on a secure communications application to enable two computers to communicate in a secure way. Developed the key exchange protocols to enable encrypted communication.

Teaching

Imperial College London   London, United Kingdom
- **Introduction to Machine Learning** · Teaching Assistant   *2020 - 2021*
  Course taught by Dr. Antoine Cully. Teaching and marking.

Imperial College London   London, United Kingdom
- **Deep Learning** · Teaching Assistant   *2020 - 2022*
  Course taught by Dr. Berhnard Kainz. Teaching and marking.

Projects/other experience

Sloan Sports Conference 2023 Research Paper Finalist
Paper titled "Thinking the GOAT: Imitating Tennis Styles" selected as one of seven to be presented at the Sloan Sports Analytics Conference 2023 as a finalist paper.

The Data Open, Europe Regional Datathon 2020, by Citadel and Correlation One
Won first place in a team of four. Developed new methodology to identify areas undergoing gentrification.

Machine Learning for the Analysis and Prediction of Film Performance
Master's thesis: awarded Distinguished Project (Dept. of Computing, Imperial College London). Worked in collaboration with FilmChain to identify reasons for a film's success, thereby providing key insight to independent filmmakers on important factors to focus on for financial success. Developed models to predict film performance (box-office, Blu-Ray/DVD sales) in several countries prior to release, and identify inherent relationships between success in different countries. Modelled post-release box office performance as a time series.

Researcher at Imperial College Algorithmic Trading Society (AlgoSoc)
Research into generative models in finance.

Programming Skills

Languages: Python , C++ , C , Java , MATLAB , Elixir   **Frameworks:** PyTorch , Keras