Padmanaba Srinivasan

https://dangerbot3pic.github.io

Email : padmanaba.srinivasan16@imperial.ac.uk
Mobile : +44 7710 150416

EDUCATION

Imperial College London — London, United Kingdom
Doctor of Philosophy (PhD); Computing — Oct. 2020 - Present

Imperial College London — London, United Kingdom
Master of Engineering (MEng); Electronic and Information Engineering; First-Class Honours — Oct. 2016 - Jun. 2020

Pitsford School — Northampton, United Kingdom
A-Levels in Mathematics, Physics, Further Mathematics, Chemistry; 2A*, 2A — Sep. 2014 - Jul. 2016

EXPERIENCE

Credit Suisse — London, United Kingdom
Software Engineer · DTS — 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:** Worked with 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 — Cheltenham, United Kingdom
Cybersecurity Intern · Various Teams — Jul. 2018 - Sep. 2018

- **Proprietary Image Viewer:** Developed an image viwer 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.

PROJECTS

Machine Learning for the Analysis and Prediction of Film Performance: Master's thesis. Worked in collaboration with a startup, FilmChain, to identify reasons for film success, thereby providing key insight to independent filmmakers on key factors to focus for financial success. Developed models to quantitatively predict film performance 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.

IBM IT Architecture: Trained by IBM IT architects on the design of commercial IT architecture and led team in developing IT architecture for a fictional firm and pitched the design to a panel of experts.

ML Framework: Developed an ML framework with a team to implement tree based models such as Decision Trees, Random Forests etc., in addition to a Neural Network framework. Deployed models and displayed their capability on various regression and classification tasks.

C90 Compiler: Designed a compiler for the C90 specification using Flex and Bison as the Lexer and Parser, respectively. Used an AST written in C++ to enable compilation of C code to assembly.

PROGRAMMING SKILLS

Languages: Python , C++ , C , Java , MATLAB , Elixir

Frameworks: PyTorch , Keras