PIUG 2019 Annual Conference Workshop

Artificial Intelligence Basics for Patent Professionals

Time and location:

Wednesday, May 8: 1:00pm – 4:00pm; conference room to be determined

Abstract:

In this workshop, we aim to familiarize the patent professionals with basic ideas in AI and machine learning and the emphasis will be on developing and intuitive understanding of approaches and not on mathematical rigor. The workshop content is broken down into six parts.

Part I: This part of the workshop will delve deep into recent developments in AI and the breadth of AI applications. We will provide a glimpse into tools and trends that are poised to accelerate innovation. Welcome to the Fourth Industrial Revolution.

Part II: This part of the workshop will explain the basics of supervised, unsupervised and reinforcement learning methods. AI based patents are increasingly reporting the data analytics workflow using such machine learning methods. We will cover the fundamentals, challenges and opportunities of different algorithms. Also we will discuss the landscape of machine learning from a patent perspective.

Part III: This part of the workshop covers essential concepts in neural networks and the basics of major deep learning models starting with Convolutional Neural Networks. We will also discuss some topics on computer vision technology and applications. The goal is to empower the patent searchers with the skills of deep learning that will help them to evaluate the deep learning based patents.

Part IV: In this part of the workshop, we will discuss neural network methods for Natural Language Processing which includes Word embedding and Recurrent Neural Networks. Some of the applications will be discussed, for instance, machine translation, sentiment analysis, topic modelling, indexing and AI driven patent classification. These methods are increasingly applied to process the patent texts at the patent offices and by business intelligence analysts.

Part V: AI is a global phenomenon, a technology that has arrived. Given this, in this part of the workshop we will discuss the patent activity in AI and how this is influencing different industry verticals. With the patent landscape is rapidly changing patent offices are discussing the interplay between AI and patents. Analysis of patents requires expertise in AI. In other words, learning AI is increasingly becoming important for a patent professional. We will discuss all these topics in this part of the workshop.

Part VI: Last but not the least, we will discuss how the patent search software tools are migrating towards AI and upgrading their newer version with these techniques. Also we will discuss some of the AI based patents as case studies in different domains such as, biotechnology, pharma, electronics, mechanical and the like.

AI is getting ready for patents, but is patent searcher ready for AI?

Presenter:

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Parthiban Srinivasan is the Founder and CEO of VINGYANI, a data science company focussing on Informatics 2.0, that is, Deep learning, Natural Language Processing and Machine Learning for Drug Discovery and Health. Parthiban Srinivasan is an experienced data scientist, earned his PhD from Indian Institute of Science, specializing in Computational Chemistry. He holds dual Masters Degree- one in Science and the other in Engineering. After his PhD, he continued the research at NASA Ames Research Center (USA) and Weizmann Institute of Science (Israel). Then he worked at AstraZeneca in the area of Computer Aided Drug Design. Prior to joining Vingyani, he headed informatics business units in Jubilant Biosys, GvkBio and Reverse Informatics. He is a PIUG member since 2006.