INTRODUCTION TO SOFT COMPUTING

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Lotfi A. Zadeh – **"Father of Soft Computing"**

"Soft Computing is an emerging approach to computing which parallel the remarkable **ability of the human mind to reason** and **learn** in an environment of **uncertainty** and **imprecision". – Lotfi A. Zadeh**
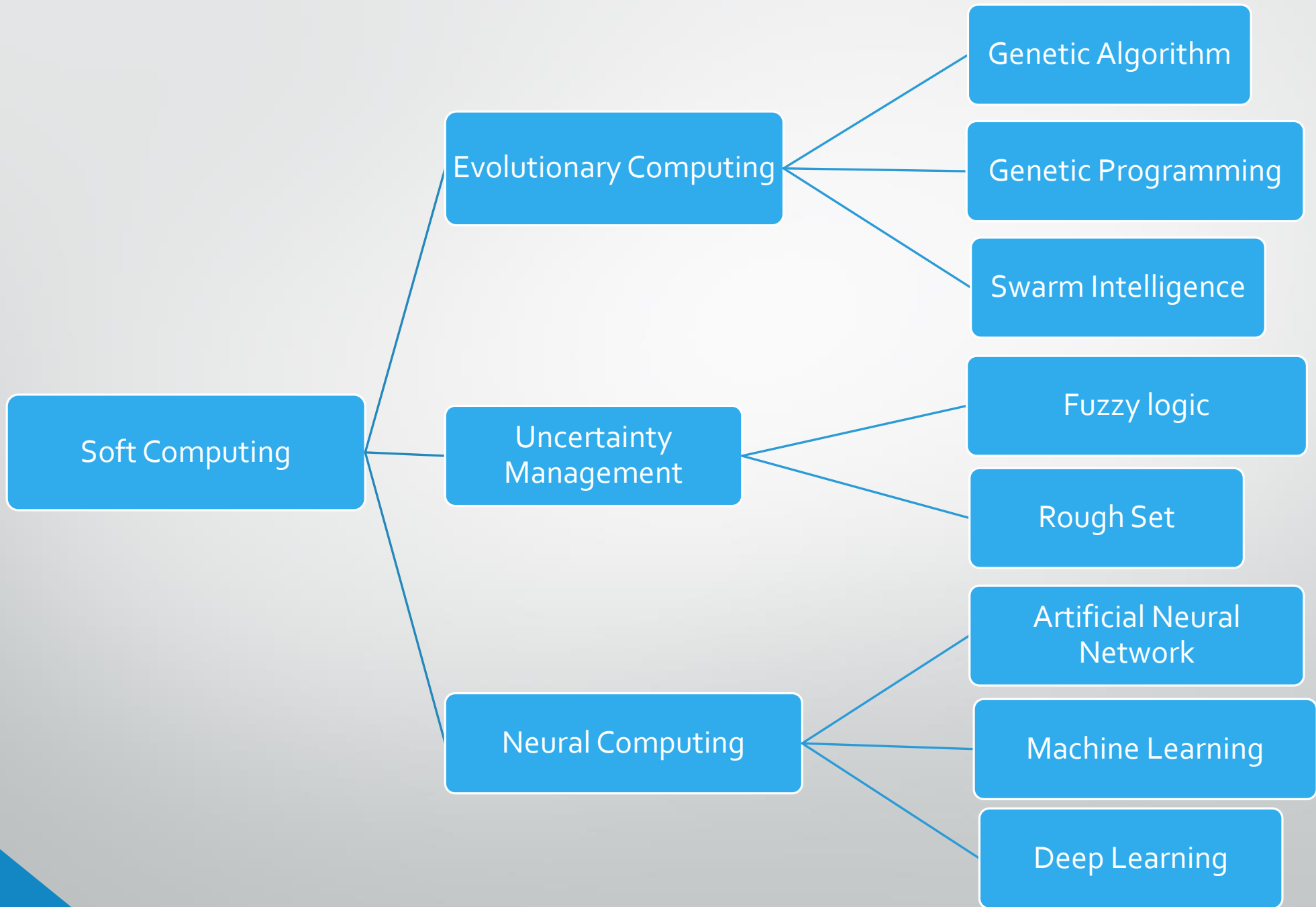
INTRODUCTION

- The idea behind soft computing is to model cognitive behavior of human mind.

- Soft computing is the fusion of methodologies designed to model and enable solutions to real world problems, which are not modelled or too difficult to model mathematically.

- The aim of soft computing is to exploit the tolerance for imprecision, uncertainty, approximate reasoning and partial truth in order to achieve close resemblance with human like decision.

PROPERTIES OF SOFT COMPUTING

- It is used to solve real life problems (decision making, management etc.)

- It is very flexible and not rigid.

- It is soft because it can be redesigned according to the requirement of the problem.

- It is adaptive in changing environment and can learn to do better.

- It is cost effective.

DIFFERENCE BETWEEN SOFT COMPUTING AND HARD COMPUTING

Hard Computing	Soft Computing
Conventional computing requires a precisely stated analytical model.	Soft computing is tolerant of imprecision.
Often requires a lot of computation time.	Can solve some real world problems in reasonably less time.
Not suited for real world problems for which ideal model is not present.	Suitable for real world problems.
It requires full truth	Can work with partial truth
It is precise and accurate	Imprecise.
High cost for solution	Low cost for solution

THANK YOU