

Introduction

In the beginning, computers were invented with an aim to supplement human thinking methods, more specifically, to help us think straight through the midst of complexity. This workshop provides a journey of mathematical knowledge discovery accompanied with the nurturing of computer skills by the way. In practice, the Mathematics part will include some basic counting principles and statistics, and the Computer part will be some pre-written Python codes for high school students. Through this journey, a student may develop his/her own style of exploration via self-experiment, peer-learning, interaction with ChatGPT/DeepSeek, etc.

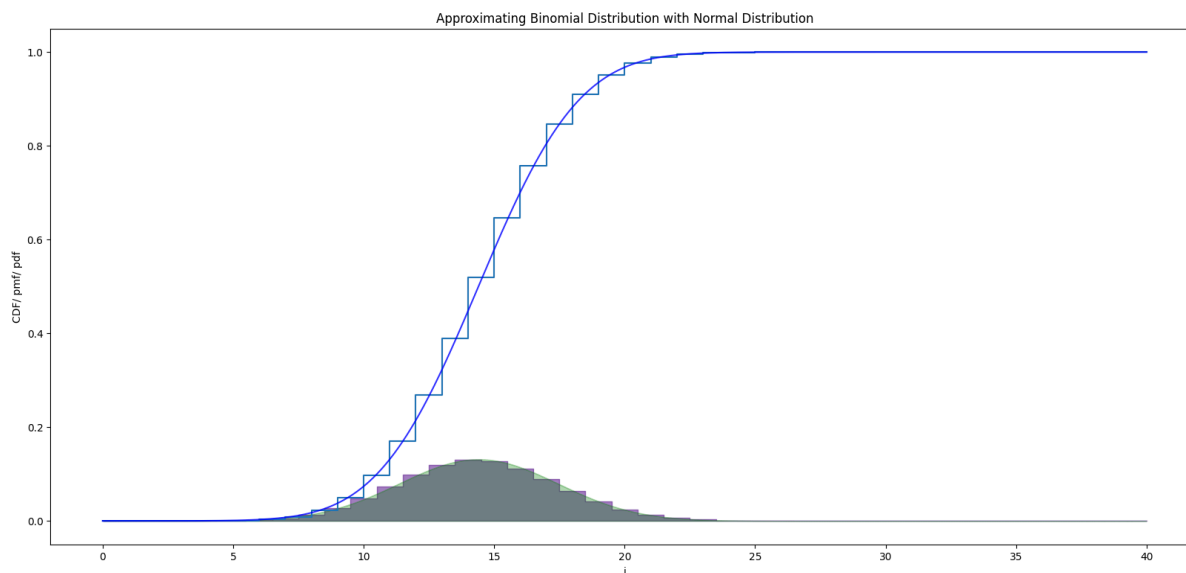


Figure 1: A visual comparison of a binomial distribution $B(n, p)$ and a normal distribution with the same mean and variance for a large n .

Resources: <https://github.com/EssenceBL/NextGenCurriculumDemonstration> forked from HanlunAI

Resources Status: Open-sourced by Hanlun AI in 2022.

Course History: Derived from a workshop trial run at a local school, SPC in 2022. That was summarized in an article appearing in HKAME's EduMath (2023. Issue 45, pp.75-83.). Joint work of two authors.

Support needed for a delivery

Venue: Computer Room/ PC laboratory

Target Groups: Highly motivated secondary school students

No. of sessions: 4 sessions, 1.5 hours per session

Maximum capacity: 2 classes, maximum 20 students per class

Finance: \$5000 per session per class (i.e. \$40000 for a total of 2 classes, each with 4 sessions, quotation valid for 30 days)

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