Be a hacker

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個人網站

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Why you join?

whoami

1. Linux Kernel Module Programming Guide 貢獻者.
2. 繁體中文第一貢獻者of Debian Reference.
3. 中山大學資工系「作業系統」助教
4. 嘉中電腦社（資研社）107級社長、中山大學資安社創社社長
5. 真hacker 駭客是什麼？、工程師的價值
6. Senior Backend at FatBull.

良心忠告

1. 英文很重要**(後面都是英文)**
2. 自學、多聽多想、敢問、hacker 心態
3. 李琳山院士的建議(2019-2021): YouTube
4. 建立你們的共筆文化HackMD
5. **聽不懂請立即**發問於slido
6. 多參加conference，「認識別人」，最好可以認識「大老」

What you have to learn in this lession

- Be a hacker, not an user.
- Learn Linux ASAP.
- Professors are not idiots.
- Mathematics is critical but not essential. (which classes)
- Read the document.

Visionary & Engineer

You must see this: Linus Torvalds

Nvidia

Outline

Hacker

What's hackers

https://www.youtube.com/watch?v=kstOxNr2deg

Introduce some BIG people in hackers

- Richard M. Stallman (RMS)
- Linus Torvalds
- Eric S. Raymond
- Edward Snowden

User

Linux

Partial Linux

https://dorm.scc-net.tw/

Do some practices of CLI.

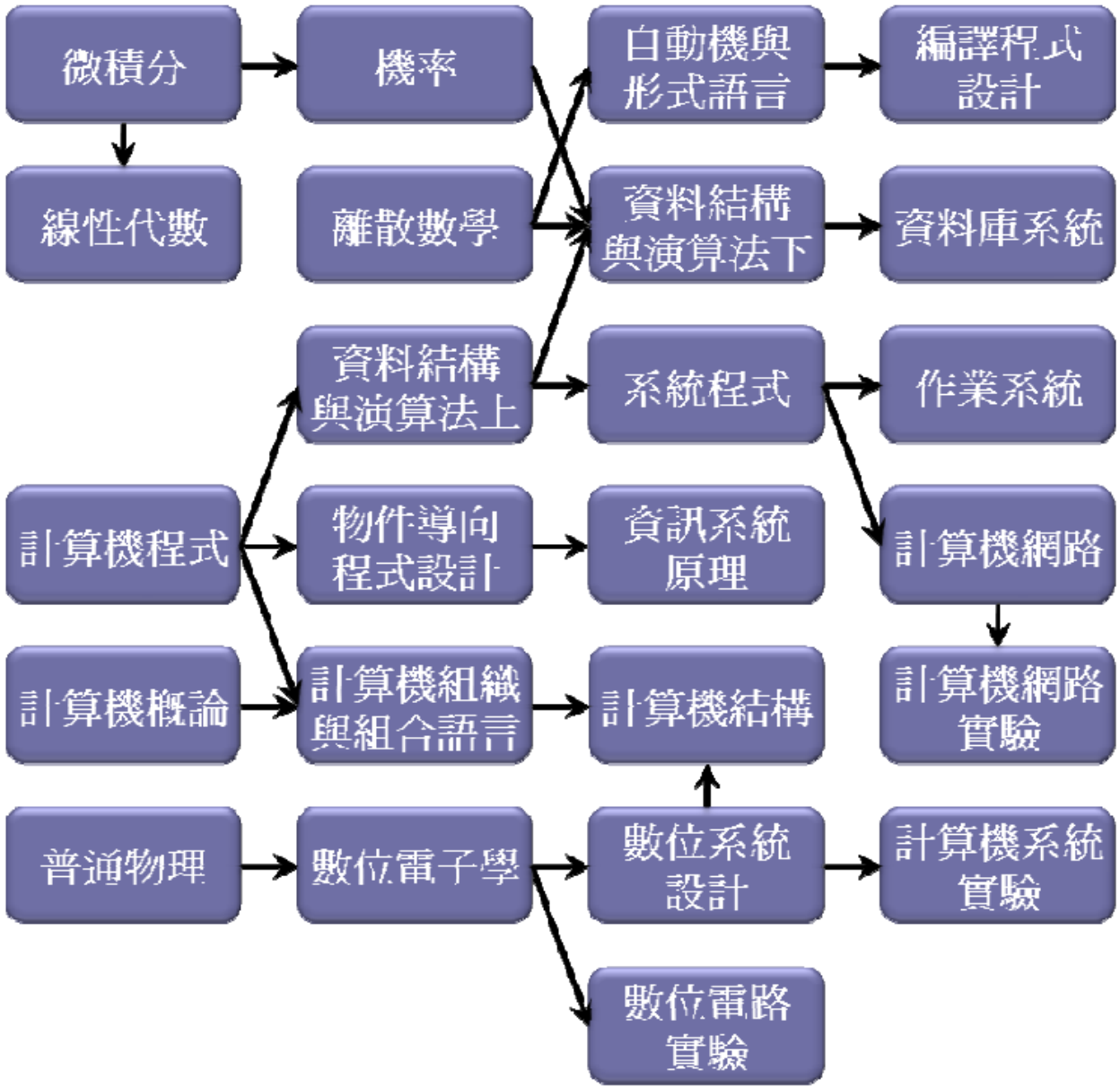
Mathematics

Nope.

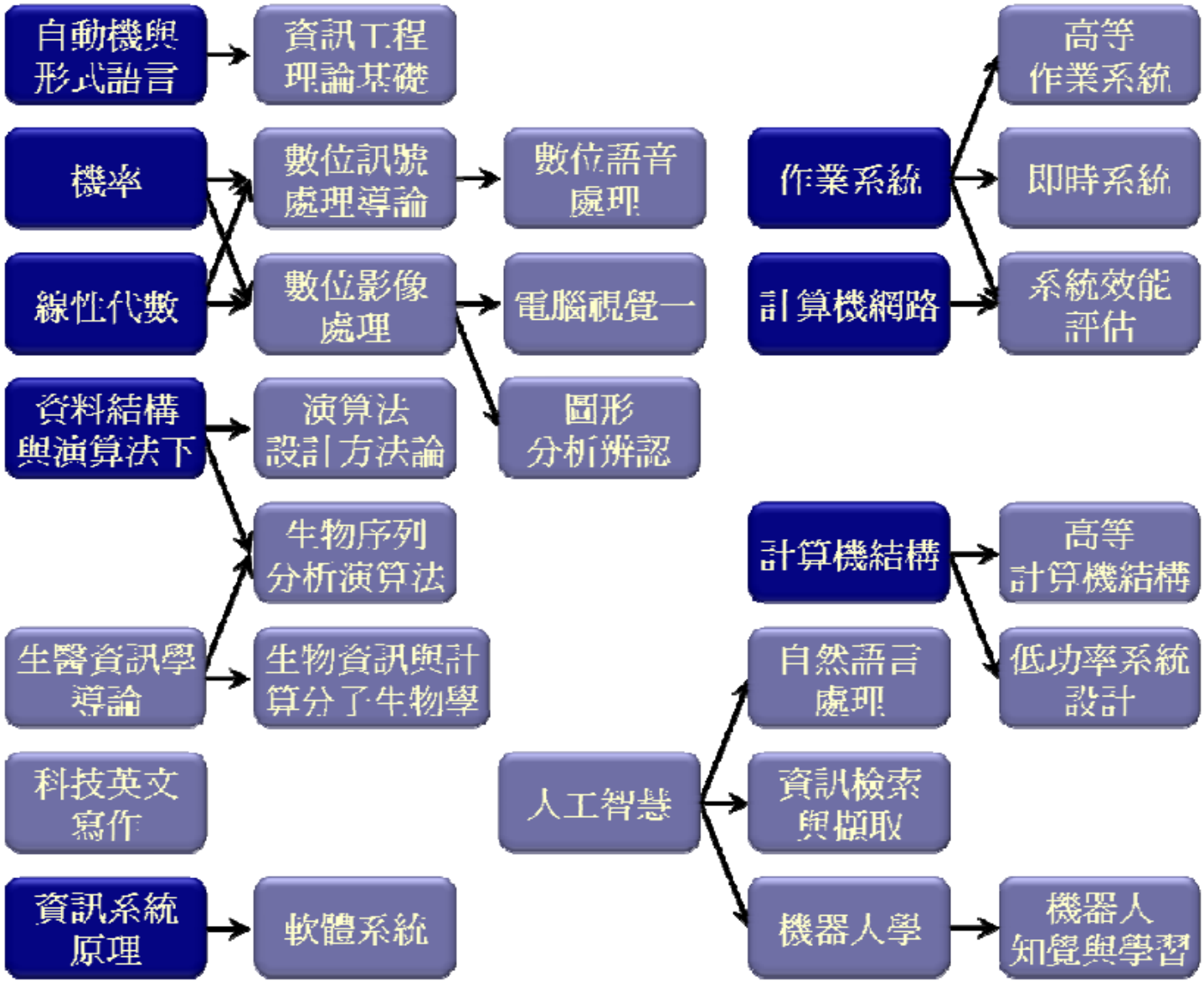
Road map

Teacher: https://www.csie.ntu.edu.tw/members/teacher.php?mclass1=110
Read map: http://coursemap.aca.ntu.edu.tw/course_map_all/class.php?code=9020

大學部必修課程流程


微積分
機率
自動機與形式語言
編譯程式設計
線性代數
離散數學
資料結構與演算法下
資料庫系統
資料結構與演算法上
系統程式
作業系統
計算機程式
物件導向程式設計
資訊系統原理
計算機網路
計算機概論
計算機組織與組合語言
計算機結構
計算機網路實驗
普通物理
數位電子學
數位系統設計
計算機系統實驗
數位電路實驗

研究所課程流程（部分）


自動機與形式語言
資訊工程理論基礎
機率
數位訊號處理導論
數位語音處理
線性代數
數位影像處理
電腦視覺一
資料結構與演算法下
演算法設計方法論
圖形分析辨認
生物序列分析演算法
生醫資訊學導論
生物資訊與計算分子生物學
科技英文寫作
資訊系統原理
軟體系統
作業系統
高等作業系統
即時系統
計算機網路
系統效能評估
計算機結構
高等計算機結構
低功率系統設計
人工智慧
自然語言處理
資訊檢索與擷取
機器人學
機器人知覺與學習

AI/ML

- Linear Algebra
- Calculus
- Probability and Statistics
- Algorithm
- Engineering mathematics

Or be an user . . .

Media

- Linear Algebra
- Algorithm
- Engineering mathematics

OS, ES

- Probability and Statistics
- Algorithm
- Numeracy (Bitwise. . .)

IS, Crypto

- Algorithm (NP)
- Linear Algebra
- Discrete mathematics (Groups)

Network

- Algorithm (Graph)
- Probability and Statistics
- Discrete mathematics (Graph)

Hardware

IDK
You can search it in EE, ECE . . .

Gamming Engine

- Algorithm (Graph)
- Linear Algebra

Programming Contest

IOI
ICPC

Document

English

It is why I said that English is important. However, those documents are not hard to read.

(It is a **bad** document if it is hard to read.)

For example:

man ls

```
LS(1)                          User Commands                          LS(1)

NAME
       ls - list directory contents

SYNOPSIS
       ls [OPTION]... [FILE]...

DESCRIPTION
       List  information  about the FILEs (the current directory by default).  Sort entries
       alphabetically if none of -cftuvSUX nor --sort is specified.

       Mandatory arguments to long options are mandatory for short options too.

       -a, --all
              do not ignore entries starting with .

       -A, --almost-all
              do not list implied . and ..

       --author
              with -l, print the author of each file

       -b, --escape
              print C-style escapes for nongraphic characters

       --block-size=SIZE
              with -l, scale sizes by SIZE when printing them; e.g., '--block-size=M';  see
              SIZE format below

       -B, --ignore-backups
              do not list implied entries ending with ~

       -c     with  -lt: sort by, and show, ctime (time of last modification of file status
              information); with -l: show ctime and sort by name; otherwise: sort by ctime,
              newest first
```

For example

The linuxserver.io
The Linux kernel documents
The fiber package

Write a tiny fiber program

Write a counter program counting the number of 'GET' requests.

Hint: Open your powershell and use the ssh to write this program.

```go
package main

import "github.com/gofiber/fiber/v2"

func main() {
    app := fiber.New()

    app.Get("/", func(c *fiber.Ctx) error {
        return c.SendString("Hello, World!")
    })

    app.Listen(":3000")
}
```

(Step-by-step)

Appendix

Industries

1. stackoverflows
   - 2021、2020、2019
2. 刷經歷Nic, My skills should not less than him.
3. 刷題Terry
4. 做side project，Rain and my experience.
5. GUTS. 資訊科技產業專案設計

AI might be hot now, but I don't know the AI at all.

My chances, interviews, and works

1. TTC intern
2. Red-Hat RD (WFH): Give the solution before deadline
3. FatBull senior back-end (WFH) count by working hours:

Why you get the master degree?

- Can you bypass the junior.
  - 極短碎碎念
- I believe that everything will return to the essence.
  - 駭客是什麼？

My side projects

GitHub

Interviewee

- Junior
  - LeetCode(DS/ALGO)
  - Implement some functional requirements
  - Basic concepts: socket, Gaussian mask, Any programming language, Design pattern
- Senior
  - Working experience: Show your contribution numerically.
  - Advanced concepts: System design, Hierarchy, Concurrent, Performance, CI/CD

Hack the judge

Why you join?