

课程考核说明

考核标准

Attendance & participation: 40%, final project: 50%, project (bonus): 10%.

平时课堂参与：40%，最终实践报告：50%，项目加分：10%。

实践报告

任选如下项目并完成实践报告：MNIST手写数字分类问题、IMDB影评正负面分类问题，或其他自选问题。

截止日期

结课后三周，即6月7日（第15教学周）。

实验报告要求

- 完整个人信息：学号、姓名、专业。
- 标题：写明选题。
- 正文：详细阐述解决思路。
- 代码：需要保留原始输出，其中包括评价指标（如分类正确率）。
- 总结：对照评分规则给出自我评价分数，并说明依据。

基本评分规则

- 实验报告完成度：20%。
- 能够使用训练的模型对新测试数据进行预测：20%。
- 设计新的模型架构，并在测试集上的效能超过教材上的基准实现：10%。
- 新测试数据上的正确率：10%。

MNIST手写数字分类问题

可以参考教材第2.1节和第5.1节。教材上基准实现的测试精度：99.3%。只要设计的模型在测试集上的效能超过这个基准，就可以得到10%的分数。

准备新测试数据

在任意画图软件上做出10个手写阿拉伯数字：

- 分别对应数字0-9。
- 保存成网络输入要求的尺寸及格式。
- 在实验报告的代码部分：能够用绘图函数绘制出这10张图片。
- 计算正确率的方法：每识别正确一个计1%，总计10%。

IMDB影评正负面分类问题

可以参考教材第3.4节和第6章。教材上基准实现的测试精度：89%。只要设计的模型在测试集上的效能超过这个基准，就可以得到10%的分数。

准备新测试数据

参考附录，或任意编写10条影评：

- 其中应该包括一半正面评价和一半负面评价。
- 在实验报告的代码部分：能够打印出这10条评论的内容。
- 计算正确率的方法：每识别正确一个计1%，总计10%。

FAQ

Q: 是否可以按小组提交?

A: 可以，但每组最多不超过5人，并在封面上标明小组负责人和其他组员。此外：

- 为了肯定组长的工作，每位组员的分数扣除1%，并将这些分数加在组长的成绩中。
- 为了鼓励独立解决问题，每位同学的最终成绩扣除[高重复度报告的份数]%。

举例：

- 独立完成：无分数修正。
- 三人组：组长(2 - 3 =) - 1，组员(-1 - 3 =) - 4。
- 三人组，另有5份高重复度报告：组长(2 - 3 - 5 =) - 6，组员(-1 - 3 - 5 =) - 9。

Q: 如何保存代码?

A: 使用 JupyterLab 导出成PDF。注意：Jupyter 对中文的支持不好，可能中文的输出是空白或乱码。建议只用 Jupyter 完成代码部分并导出，而正文部分在另外一个文档中撰写。

附录：影评测试集示例

以下影评均节选自：[Avengers: Endgame \(2019\)](#)¹。

若使用本示例：1-5 Star 视作负面评论；6-10 Star 视作正面评论。

[1 Star] Endgame is everything wrong with today's cinema

Constant stupid jokes, annoying cgi, fake deaths, predictable outcomes, product placement, no sense of danger, self indulgent ending, idiotic fan service, brainless action, and cliché-ridden idiocy is the best way to describe this film. It is fast

food for the brain. If you want to take your kids to a fun movie, skip endgame, take them to Ford vs Ferrari. It may be just as sad at times, but it is based off a true story and has great acting, intelligent humor, a fantastic script, and heartwarming moments. It is enjoyable for everyone, and it doesn't have to be as idiotic as this trash to get people to enjoy it. Scorsese is right.

[2 Star] A Terrible Conclusion

This movie lacked everything that made its predecessor Infinity War so great. The comedic take on Thor was the worst part of the whole 22 movie franchise. The pace of the movie was slow and boring. Overall, this movie is one big disappointment.

[3 Star] Infinity war was soooo much better

WHAT THE HELL IS WRONG WITH THE RUSSO BROTHERS,,,, After you did a terrible job of messing up the hulk in infinity war you then made it worst in endgame with nonsense professor hulk and to add insult to injury you also mess up thor,,, you suck Russo Brothers,,, you did such a fantastic job with the winter soldier and civil war two of my favorite movies,, what went wrong with endgame,,,,, you took two of the strongest and best avengers and turn one into a big slob and turn hulk into a big stupid teddy bear,,,, seriously disappointed.

[4 Star] Extremely overhyped movie

The movie is average, but severely overhyped. There is nothing special and this really needs to stop being said as Marvel's best movie. Everything that it tried to add in the name of science fiction was extremely confusing and despite trying to make it seem logical, it simply comes off as mumbo-jumbo and in the end you are left confused wondering what just happened. It does not have any substance. Unlike Infinity War, which managed to hold itself together as a film, balancing all aspects such as action, emotion while also keeping the audience engaged and being understandable, Endgame is simply confusing. It is slightly redeemed by the final battle scene, and the visual effects and action is commendable, it does not completely redeem the film and it still remains an average experience.

[5 Star] Doesn't make sense

Writing about time traveling is always difficult. But there's been so many inconsistencies in this movie that I lost interest after 1 hour watching. The writing was so poorly done that I felt no emotions and got bored at some point. Infinity war were so well done that I'm really surprised that the last Avengers movie turned down like this.

[6 Star] So much potential lost ...

After Infinity War I had huge expectations. Unfortunately I think it doesn't follow the comic book at all because they wanted some kind of closure of the story. I saw a lot of 10 star reviews and I cannot believe the majority of people like this movie more than Infinity War. I'm not saying it was n't entertainment to watch but the feeling is that all heroes were forced to fit in a movie paying a big price to the story. There are moments in the movie where the rules from all other Marvel movies are broken and characters which were build over hours of screen time were reduced in order to make space for others. The story is average at best with big flaws.

[7 Star] Everyone just calm down...

... and pull the hype train over. Amazing fun, stunning spectacle great performances especially RDJ. It's just not the whole sum of its parts. Lots of great parts but not cohesively held. Too much Comedy with one character essentially now just full comedy relief. The most ridiculous coincidences and a couple of plot holes. You will laugh, you will get gut punched and for some you will cry, but then you will wonder what really happened in that 3 hours. Did it need 3 hours? No. Is it better than infinity war? No. Will you enjoy it? Definitely.

[8 Star] Endgame

There isn't too much in the way of suspense or surprises when it comes to the story, but there are some shocking moments and funny lines in this epic finale. Again, like many of the best Marvel films, the holes and flaws are covered up with humor and fan service, making everything okay. That being said, I did prefer Infinity War to this film, which really misses the leads of the other Marvel franchises that were "snapped" out. Overall, however, there are only a few ways you can wrap up the main story of the MCU, and this was a solid direction.

[9 Star] Perfect..no. Epic..absolutely

I think how viewers receive this movie is dependent upon when you were born. I was 12 years old and glued to our big screen color TV on 9/8/66 for the premier of Star Trek. I still have my Leonard Nimoy autographed fan club membership cards from 1966-69. I was in the audience in 1977 opening weekend of Star Wars after a 3+ hour wait in line. What the Marvel team created here was nothing short of spectacular. To bring these characters to life, weave their stories together bringing some to a close and launching others while still managing to cross the T and for the I, well that's epic. I've experienced a few.

[10 Star] The ending made all 22 movies worth it

If you're going to watch this movie, avoid any spoilers, even spoiler free reviews. Which is why I'm not going to say anything about the movie. Not even my opinion. All I'm going to say is:

The crowd applauded 3 times during the movie, and stood up to clap their hands after. This I have never witnessed in a Dutch cinema. Dutch crowds aren't usually passionate about this. I checked the row where I was sitting, and people were crying. After the movie, I was seeing people with smudged mascara. That's all I have to say about the movie.

附录：详细评分规则

- 实验报告完成度：20%。
- 能够使用训练的模型对新测试数据进行预测：20%。
- 设计新的模型架构，并在测试集上的效能超过教材上的基准实现：10%。
- 新测试数据上的正确率：10%。

实验报告完成度：20%

- 结构清晰、完备（封面、正文、代码、总结）：10%。
- 思路严谨、合理：5%。
- 代码逻辑正确，保持原始输出：5%。

对新测试数据进行预测：20%

- 能够制作并展示新测试数据：10%。
- 能够使用模型进行预测（`predict`、`argmax`）：10%。

设计新的模型架构：10%

- 有自己的设计思路：5%。
- 在测试集上的效能超过教材上的基准实现（`evaluate`，或将测试集用于验证）：5%。

