Adobe Illustrator & 科研制图

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汇报提纲

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02 AI 界面介绍

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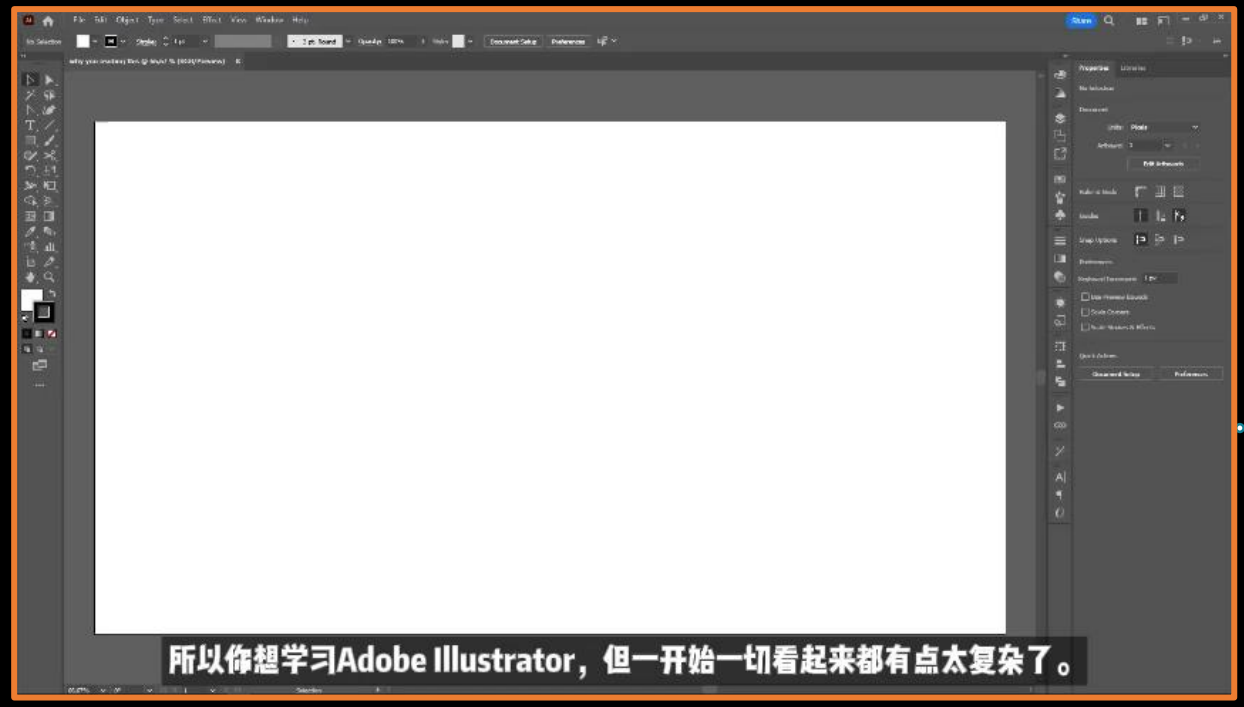
什么是Adobe Illustrator

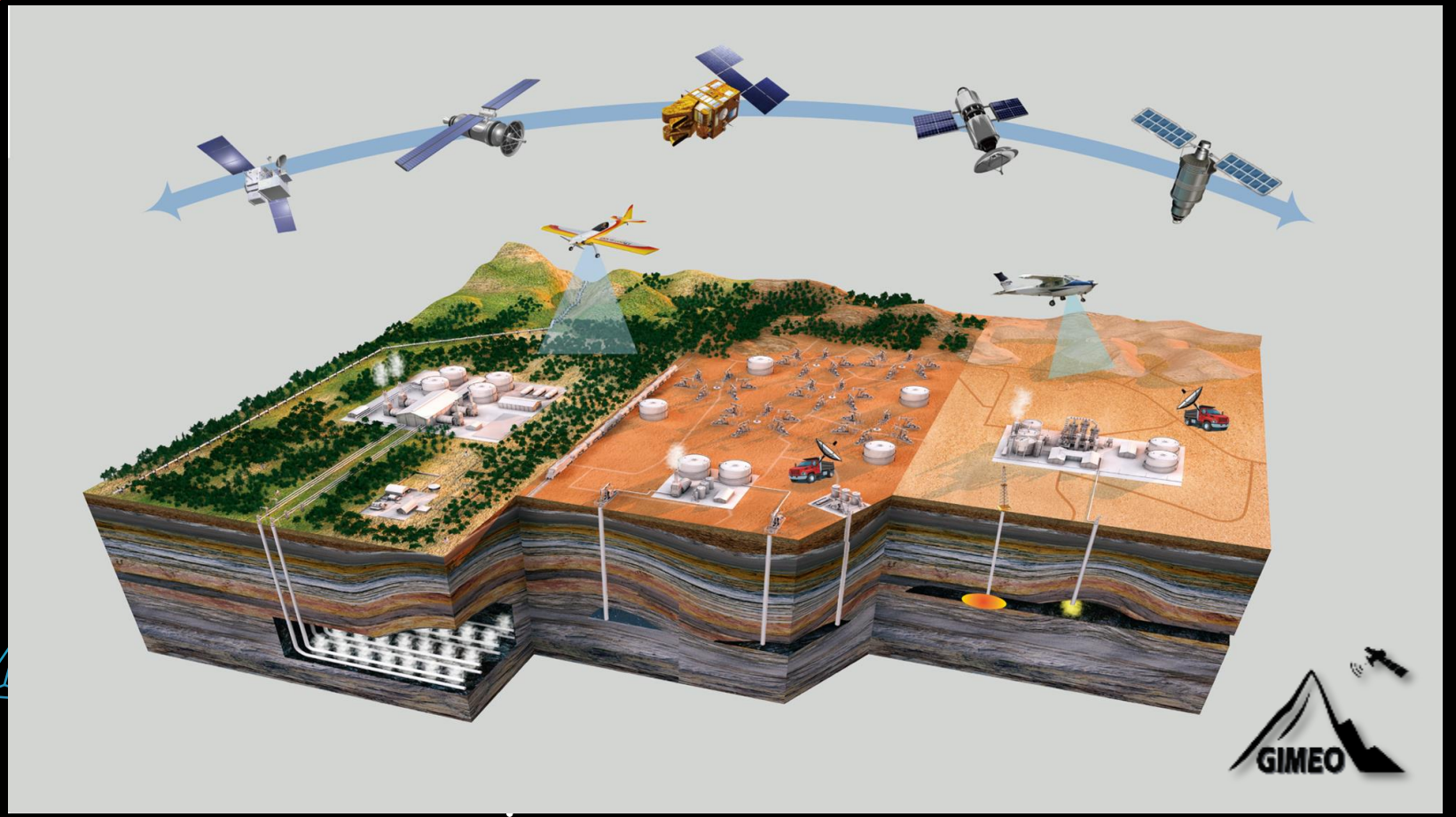
Adobe Illustrator是行业领先的图形设计工具，它使您可以设计您能想象的任何东西 - 从标志和图标到图形和插图 - 。您可以创建任何大小的图形并使他们呈现出的效果看起来与您设计的完全一样。



为什么用Adobe Illustrator

- 功能强大，多种专业工具支持，一站式掌握绘图
- 专业性强，适合场景及结构复杂的绘图场景，多种输出规格以及专业的色彩控制，可支持工业级产品输出
- 定制性和兼容性强，跨操作系统，支持多种数据格式，支持自定义颜色、样式、形状、图案库和符号库
- 资源广泛，强大的社区资源和矢量网站，主流期刊机构支持

Scientific illustration



Conference poster

Very low-grade metamorphic rocks in some representative districts in Tibet

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CUGB
CHINA UNIVERSITY OF GEOSCIENCES

Very low grade metamorphic rocks are widely distributed in Tibet, providing an insight into deformation and metamorphism during the evolution of the Tibetan Plateau. Eighty five Samples of clay mineral-bearing rocks has been collected from various strata including D, P_1, T_1, T_2, T_3, J_1, J_3, K_1, K_2 and N strata in the Qiangtang terrane, the Gangdese, the Yarlung Zangbo suture and the Tethyan Himalaya (Fig.1). Analyses and refining of clay minerals in samples have been conducted in the Laboratory of X-ray Diffraction, Institute of Petroleum Exploration, and calibrated by the international standards provided by L.N.Warr. Index of illite crystallinity (Ic) along with average thickness of crystal layers of illite, reflectivity of vitrinite and of clay mineral association have been employed as indicators of degree of very low-grade metamorphism. The scheme of classification of very-low grade metamorphism based on clay mineral indexes (mainly index of illite crystallinity) has been used in the present work, that is, low metamorphism (Ic<0.25), higher very-low grade metamorphism (Ic = 0.25–0.30), lower very-low grade metamorphism (Ic = 0.30–0.42) and diagenesis (Ic>0.42).

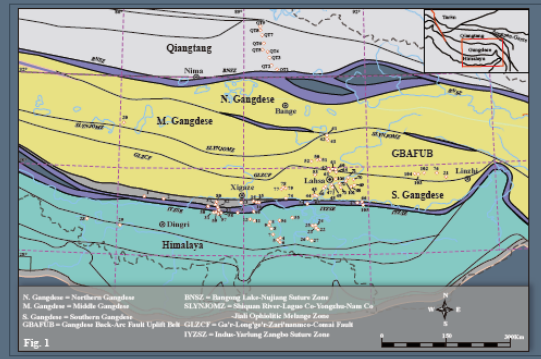


Fig. 1

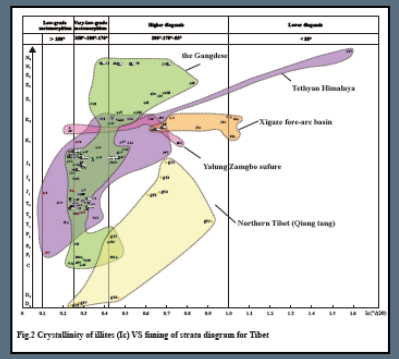
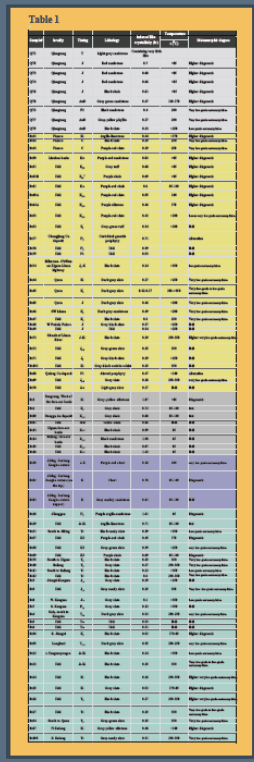


Fig.2 Crystallinity of illites (Ic) VS fining of strata disgram for Tibet

Table 1

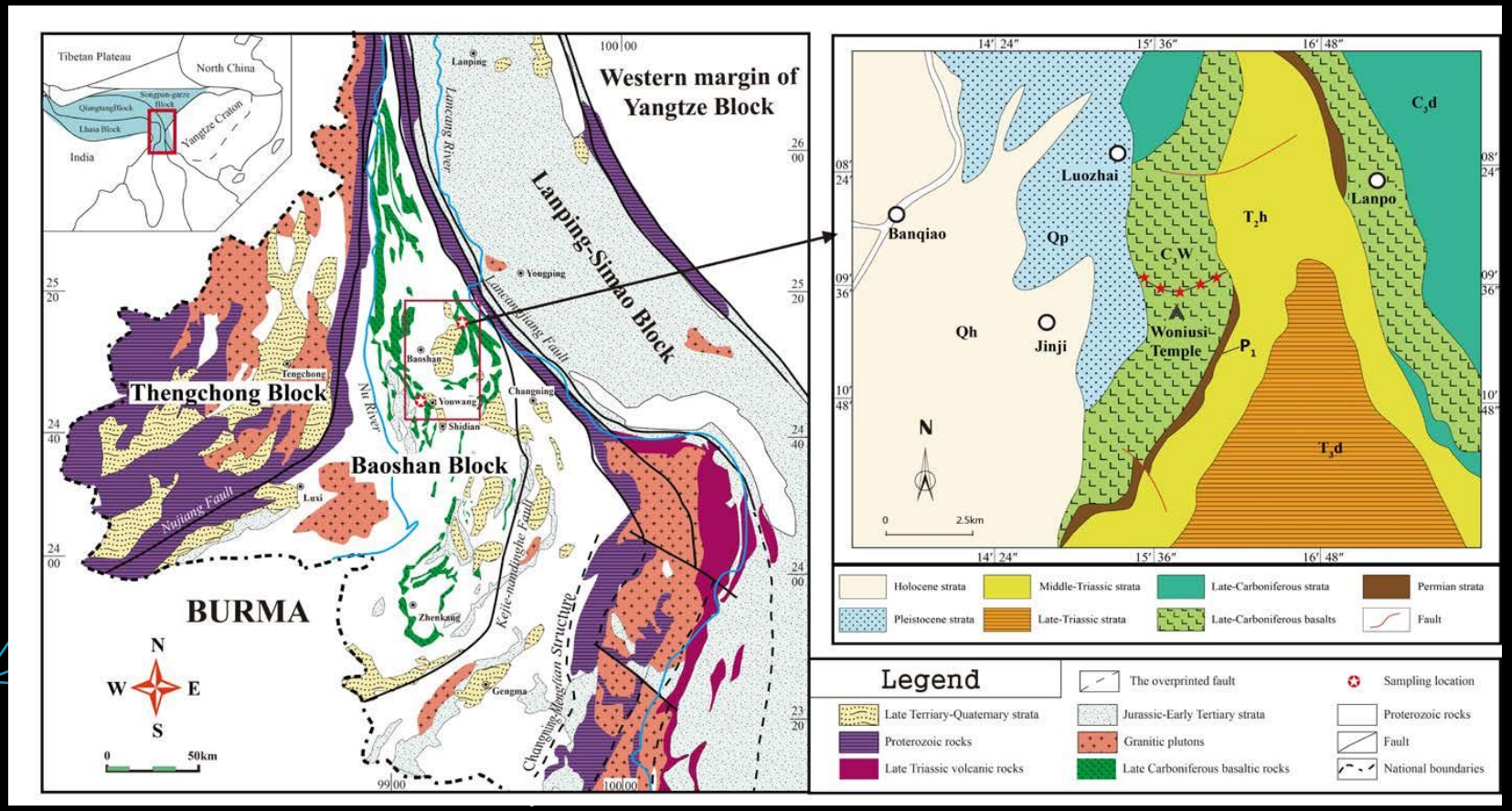


The analytical results listed Table 1 and Fig. 2 show interesting information. In the Qiangtang terrane, clay minerals in the Jurassic strata have indexes of illite crystalinity (Ic) 0.47-0.70, indicating higher diagenesis and in favor of petroleum-generation. However, index of illite crystalinity (Ic) for the Devonian is 0.23, indicating low metamorphism. Indexes of illite crystallinity (Ic) for the J-K strata in middle Gangdese are mostly 0.37-0.25 (very-low grade metamorphism) and a few 0.78-0.48 (diagenesis). Indexes of illite crystallinity (Ic) for the C-P strata in eastern Gangdese are mostly 0.25-0.42 (very-low grade metamorphism) and a few 0.20-0.25 (low metamorphism). The Mesozoic and Cenozoic magmatism and related mineralization are very strong in the Gangdese, which may affect in some extent on indexes of illite crystalinity In Tethyan Himalaya, clay mineral-bearing rocks from P_1, T_1, T_2, T_3, J_1 and J_2 strata underwent low-very low grade metamorphism, having indexes of illite crystalinity (Ic) 0.12 for P_1 stratum, 0.21 for T_1 stratum and 0.22—0.33 for the strata from T_1 to J_2, whereas K_1 and N strata underwent diagenesis, having Ic = 0.52 and 1.61, respectively. Metamorphic degree generally reduced from older strata to younger strata according to clay mineral indexes. The rocks affected by magmatism or by major faulting, however, were out of the general trend and increased their metamorphic degree by 0.1~0.3 units reduction of index of illite crystallinity. Rocks within Yarlung Zangbo suture show higher metamorphic degree than those in Tethyan Himalaya. For instance, while the late Triassic has 0.19 of index of illite crystallinity in the former (the Yarlung Zangbo suture), 0.27~0.33 of indexes of illite crystallinity in the latter. The early Cretaceous has 0.28 of index of illite crystallinity in the former, whereas 0.52 in the latter. However, the late Cretaceous Xigaze Group formed in a fore-arc environment was weakly metamorphosed, having Ic 0.7~1.6 and all falling into diagenesis field.

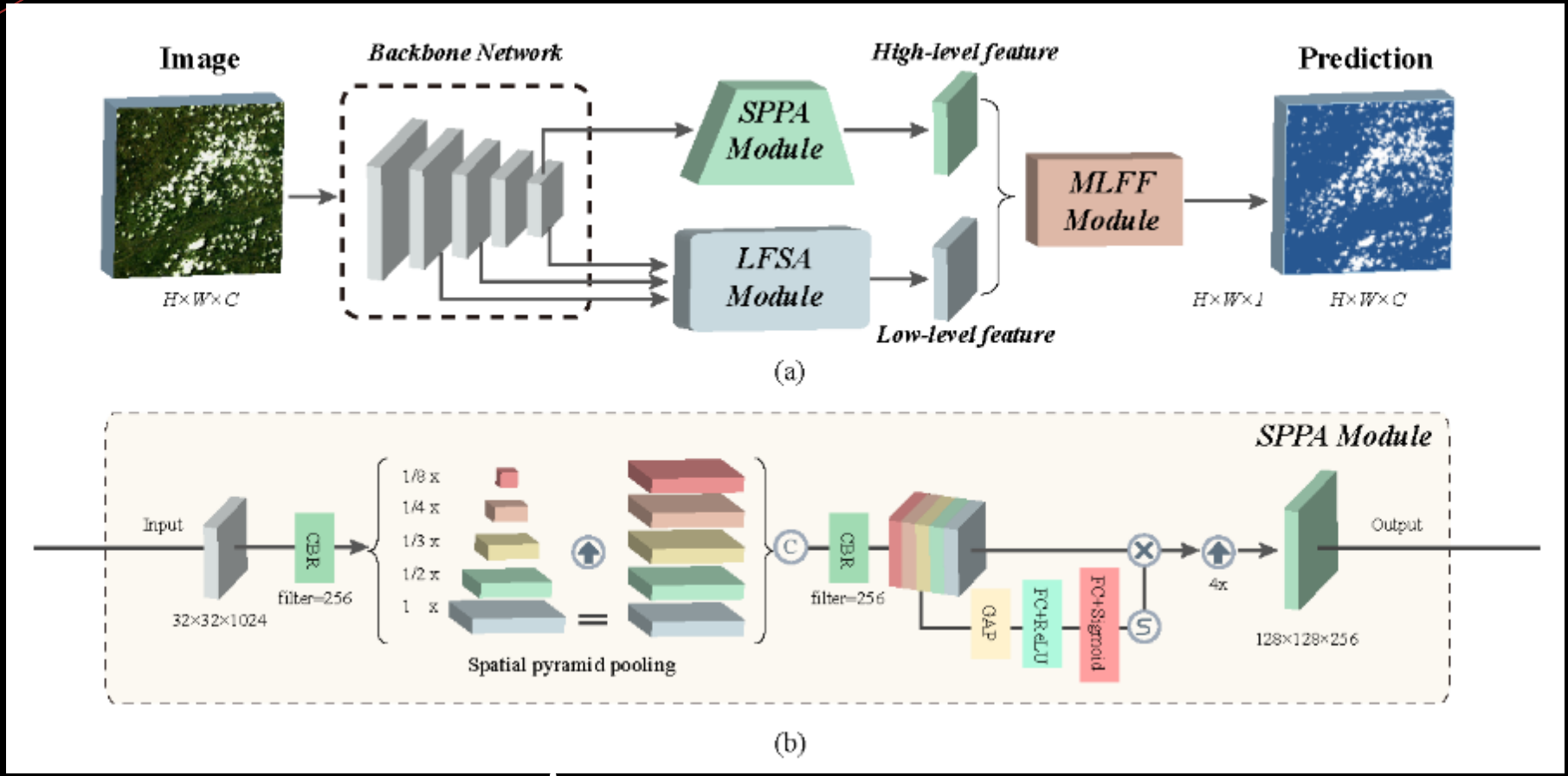
References: [1] Frey, M., 1987, Blackie, Glasgow, 9-58. [2]Bi Xianmei and Mo Xuanxue, Earth Science Frontiers 11(1):287-294.

AGRS

Geological map



Neural network architecture



Interface

AI操作界面

Welcome

- 新建不同规格的画板
- 访问已有工程文件

Yu Junchuan / 2023

Interface

AI操作界面

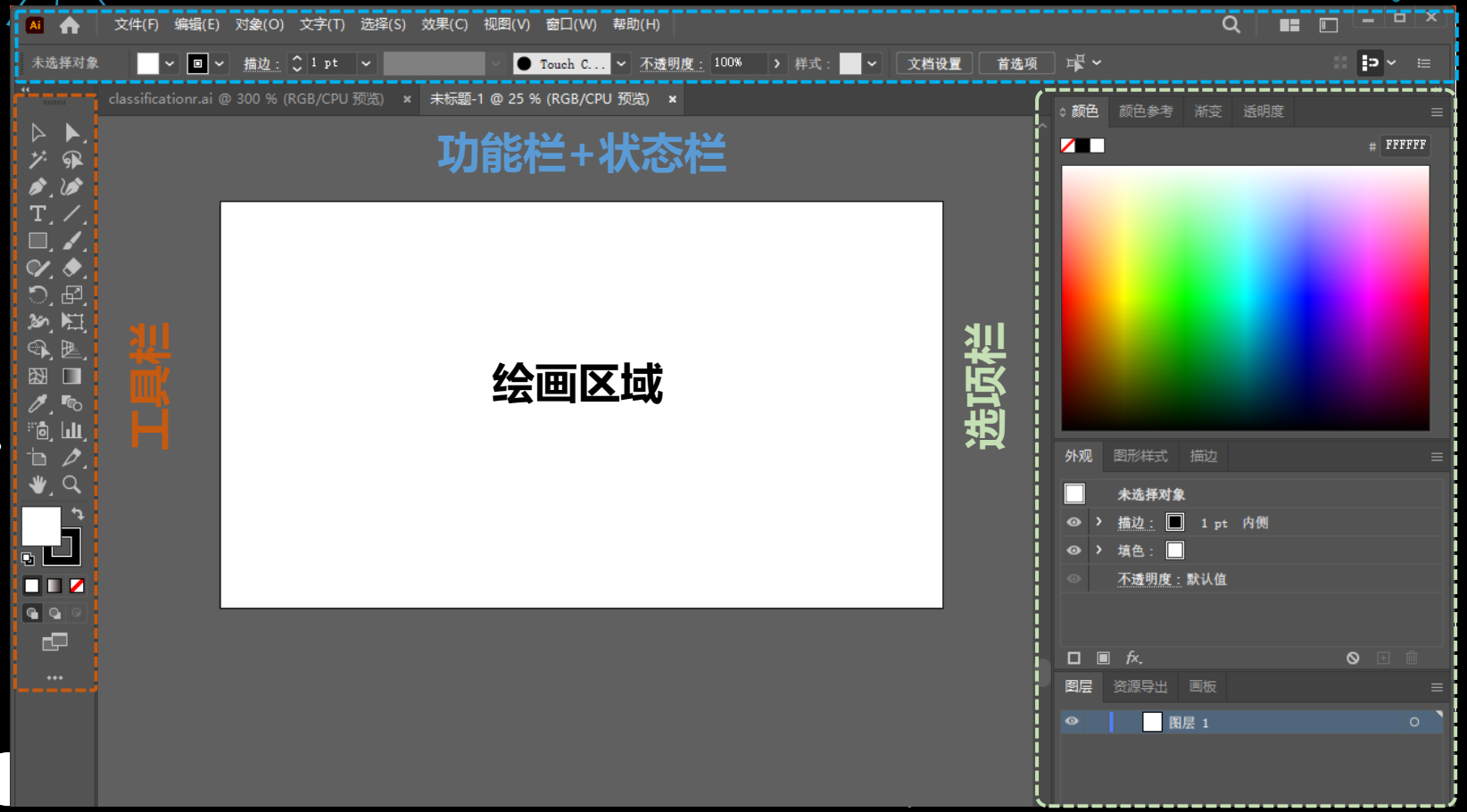
Welcome

- 自定义画板尺寸
- 打印边界
- 颜色模式

  (RGB/CMYK)

Interface

AI操作界面



Welcome

- 工具栏
- 功能栏+状态栏
- 选项栏
- 文件打开保存
- 颜色、图层
- 参考线、标尺
- 常用浏览快捷键

TASK 1

案例分析

科学插图绘制

置入外部元素

- 导入外部图片 / 矢量化
- 链接模式 / 嵌入模式

矢量图形绘制及编辑

- 形状工具 / 弧线的绘制
- 选择工具 / 直接选择工具

吸管 / 外观 / 导出

- 颜色更改 / 透明度更改
- 文件另存 / 导出

TASK 2

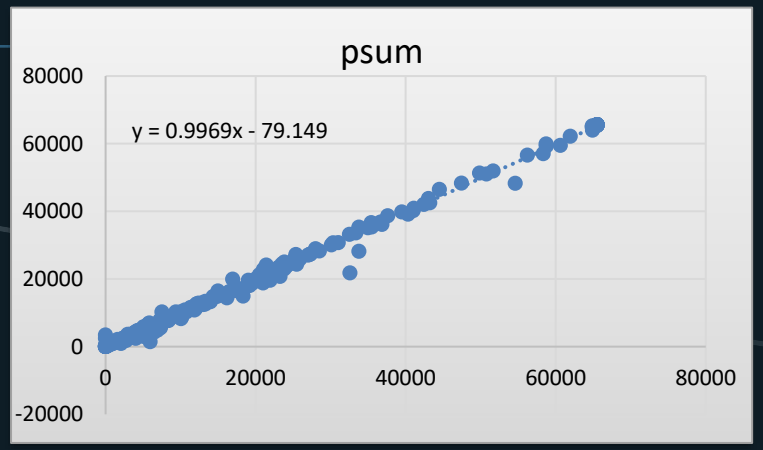
案例分析

EXCEL 表格美化

Excel 表格

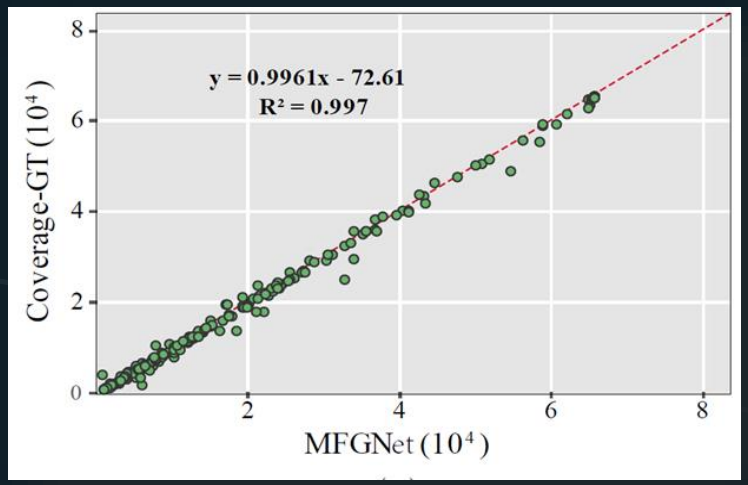
矢量元素构成

- 字体
- 图形
- 坐标轴
- 图例



AI 图表

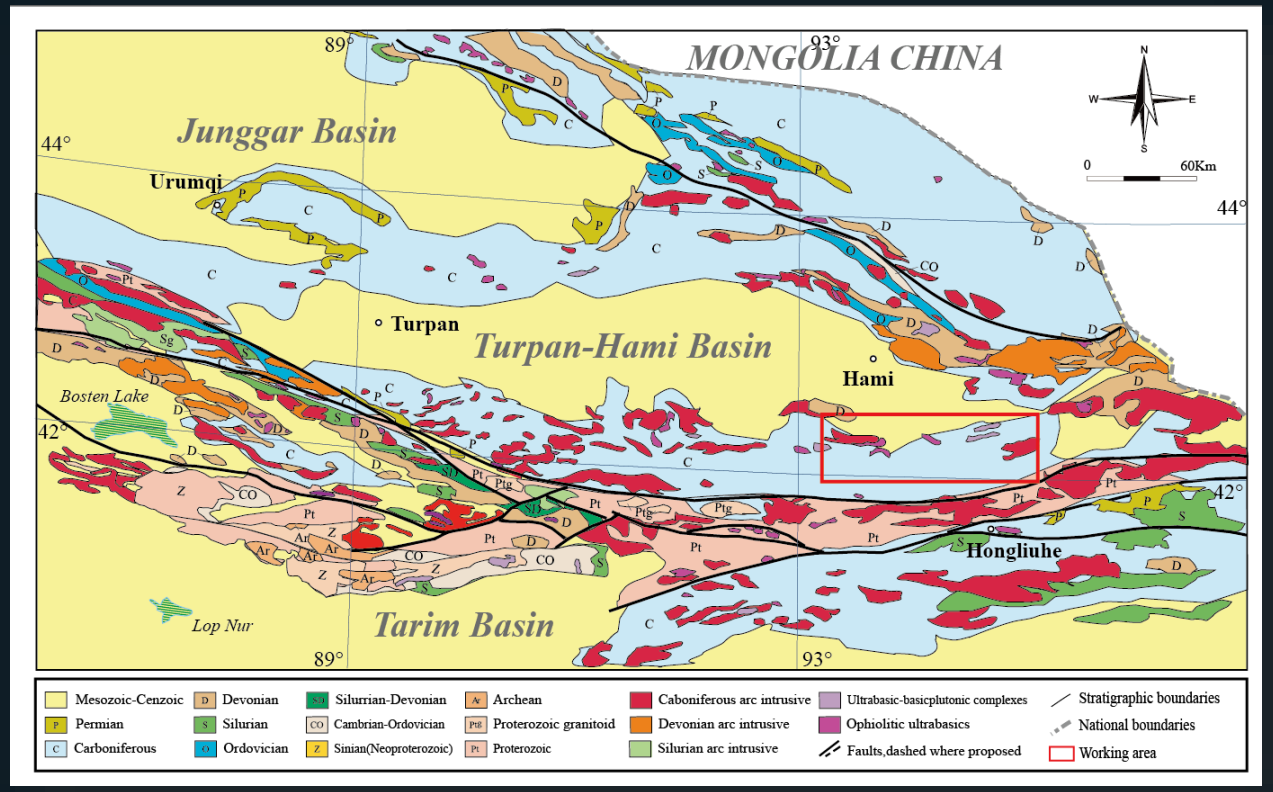
- 解组 / 编组
- 文字上下标
- 魔棒选择
- 填充和描边



TASK 3

案例分析

地质图绘制与整饰



几何拓扑

- 钢笔工具勾绘地质图
- 形状生成器使用

地图整饰

- 指南针 / 比例尺
- 图例绘制

TASK 4

案例分析

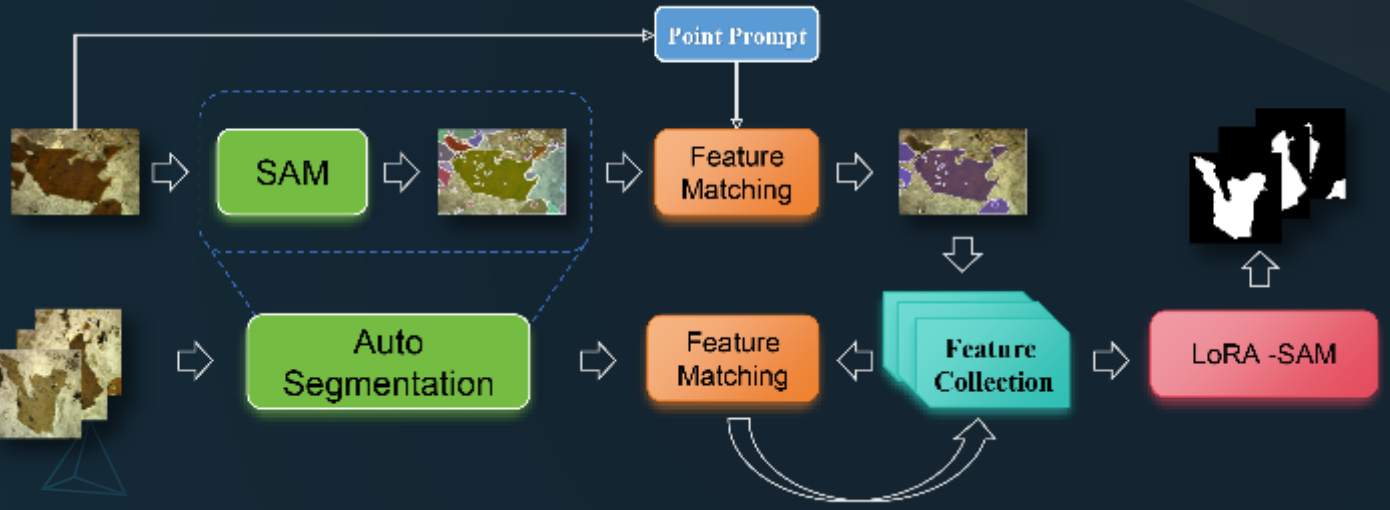
技术流程图制作

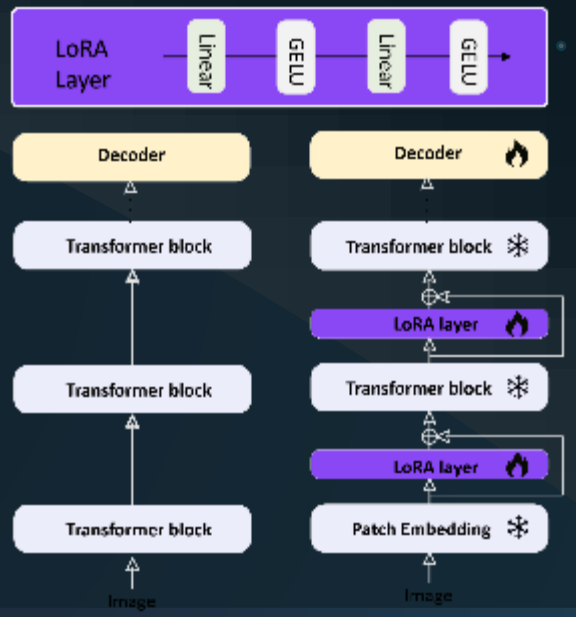
PS 与 AI 联动

- 图片目标
- PS编辑
- 取消链接
- 再次链接

PPT 与 AI 联动

- 多目标解组
- 阴影问题
- 图标共享
- 矢量元素共享

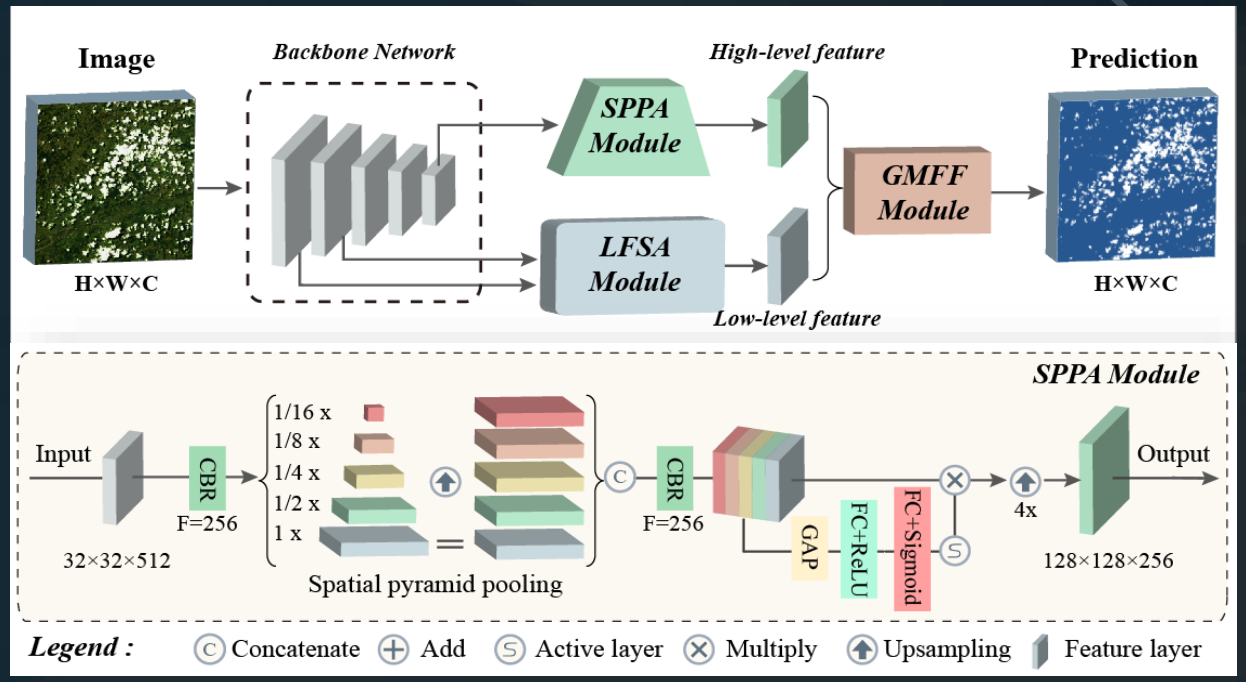




TASK 5

案例分析

神经网络结构绘制



3D模型

- 3D建模
- 模型贴皮

网络设计

- 维度变化
- 特征 / 计算

学习计划

INFOGRAPFIC

一周掌握Adobe Illustrator

第一天	第二天	第三天	第四天	第五天	第六天
熟悉界面 出入文件类型	熟悉常用工具栏 掌握画图工具	尝试几何拓扑 了解图面装饰	多来源图件美化 了解出版出图要求	学习色彩搭配 掌握结构和设计感	掌握科学绘图技巧 尝试其他类型设计

1.《生命科学插图 从入门到精通 Adobe Illustrator使用技巧》

2. B站-琅琊一肥：《【Adobe illustrator科研绘图】快速入门指南》

THANKS

GIMEO

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CHINA AERO GEOPHYSICAL AND SURVEY & REMOTE SENSING CENTER FOR LAND AND RESOURCE

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