

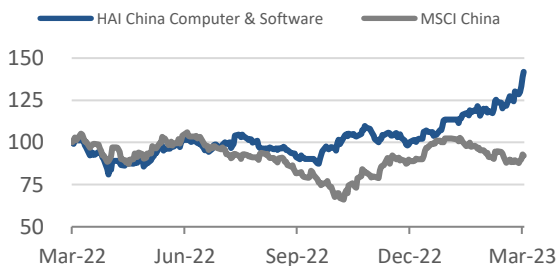
中国计算机和软件 China Computer & Software

计算机行业跟踪周报 301 期: 人工智能时代或已正式开始

Computer Industry Weekly Report (301): The Era of Artificial Intelligence may Have Officially Begun

观点聚焦 Investment Focus

股票名称	评级	股票名称	评级
海康威视	Outperform	启明星辰	Outperform
科大讯飞	Outperform	广电运通	Outperform
恒生电子	Outperform	卫宁健康	Outperform
宝信软件	Outperform	航天信息	Outperform
用友网络	Outperform	太极股份	Outperform
寒武纪	Outperform	易华录	Outperform
广联达	Outperform	拓尔思	Outperform
大华股份	Outperform	新点软件	Outperform
浪潮信息	Outperform	中望软件	Outperform
中科曙光	Outperform	中科星图	Outperform
视源股份	Outperform	航天宏图	Outperform
景嘉微	Outperform	税友股份	Outperform
中科创达	Outperform	新大陆	Outperform
奇安信	Outperform	赛意信息	Outperform
国联股份	Outperform	拉卡拉	Outperform
四维图新	Outperform	美亚柏科	Outperform



资料来源: Factset, HTI

Related Reports

- 计算机行业跟踪周报 300 期: AI 发展进入全新时代 (Computer Industry Weekly Report (300): Development of AI Into a New Era) (20 Mar 2023)
- 华为 MetaERP 即将利剑出鞘 (Huawei MetaERP is about to Sheathe Its Sword) (20 Mar 2023)
- 中国科技企业拓展中东大市场 (Chinese Technology Companies Expand into Big Middle East Markets) (14 Mar 2023)

(Please see APPENDIX 1 for English summary)

ChatGPT 推出插件功能, 可帮助访问最新信息、运行计算或使用第三方服务。根据 OpenAI 官网, 3 月 23 日, OpenAI 宣布在 ChatGPT 中实现了对插件的初步支持。插件是专门为以安全为核心原则的语言模型设计的工具, **可帮助 ChatGPT 访问最新信息、运行计算或使用第三方服务。**具体来看, **网络浏览器插件**允许语言模型从互联网上读取信息, 严格扩大了其讨论内容范围, 超越了训练语料库, 可获得当天的最新信息。该插件在安全方面做了大量工作: (1) 信息来源的可靠性和真实性; (2) 防止检索有问题内容的“安全模式”。**代码解释器**则提供了一个在沙盒、防火墙执行环境中工作的 Python 解释器, 以及一些临时磁盘空间。该插件运行的代码在一个持久的会话中进行评估, 该会话在聊天对话期间是有效的 (即有上限, 会超时), 后续的调用可建立在彼此之上。该插件还支持: (1) 解决包括定量和定性在内的数学问题; (2) 进行数据分析和可视化; (3) 在不同格式之间转换文件。此外, OpenAI 还开源了一个**检索插件**, 允许 ChatGPT 搜索一个矢量数据库的内容, 并将最佳结果添加到会话中。关于**第三方插件**, OpenAI 表示通过候选名单的开发人员可自行行为 ChatGPT 构建插件; 目前, ChatGPT 已官宣了第一批第三方插件。我们认为, 插件功能的推出, 使得 ChatGPT 在实用性的广度和深度方面都有了显著扩展, 第三方插件更带来了广阔的想象力, 为未来 ChatGPT 乃至整个 AI 大模型产业的持续发展奠定了坚实基础。

英伟达发布多款 AI 相关产品和服务, 我们或处于 AI 的“iPhone 时刻”。根据英伟达官微, 在 GTC23 大会上, NVIDIA 创始人兼首席执行官黄仁勋发布了一系列全新的产品和服务, 包括: (1) **带有双 GPU NVLink 的 H100 NVL**。与用于 GPT-3 处理的 HGXA100 相比, 配备四对 H100 与双 GPU NVLink 的标准服务器的速度最高可达 10 倍。(2) **构建 AI 基础设施的蓝图: DGX**, 其最新版本搭载 8 个 NVIDIA H100 GPU, 它们连接成为一个巨大的 GPU。(3) **NVIDIA DGX Cloud**, 通过与微软 Azure、Google Cloud 和 Oracle Cloud Infrastructure 合作, “从浏览器上”即可实现将 NVIDIA DGX AI 超级计算机“带给每家公司”。(4) **NVIDIA AI Foundations 云服务系列**, 为需要构建、完善和运行自定义大型语言模型及生成式 AI 的客户提供服务, 他们通常使用专有数据进行训练并完成特定领域的任务。(5) **用于 AI 视频、图像生成、大型语言模型部署和推荐器推理的推理平台**, 为了帮助企业部署处于快速发展的生成式 AI 模型。黄仁勋还宣布与谷歌、微软、Oracle 等一众领军企业开展广泛的合作, 为各行各业带来新的 AI、模拟和协作能力。我们认为, 英伟达此次相关产品的发布, 对于 AI 整个产业有望带来重要的推动作用, 未来 AI 在各行业的落地速度或持续提升, 我们判断, 正如黄仁勋所认为的, “我们正处于 AI 的 iPhone 时刻”。

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AI 正对人类社会造成重大改变，人工智能时代或已正式开始。3月17日，OpenAI 公布论文 *GPTs are GPTs: An early look at the labor market impact potential of large language models*，研究了 GPT 模型和相关技术对美国劳动力市场的潜在影响。其研究结论表明，大约 80% 的美国劳动力可能至少有 10% 的工作任务受到 GPT 的影响，而大约 19% 的劳动力可能至少有 50% 的任务受到影响。这种影响涵盖了所有工资水平的工作，并且高收入工作可能面临更大的风险。这表明这些模型可能具有显著的经济、社会和政策影响。根据 gatenotes 官网，3月21日，比尔·盖茨在文章 *The Age of AI has begun* 中分享，**人工智能的发展与微处理器、PC、互联网和手机的发明一样重要，人工智能将改变人们的工作、学习、旅行、医疗以及沟通的方式，整个行业都将围绕它重新定位。**我们认为，伴随国内外厂商不断推出 AI 的新模型、产品与服务，并不断拓展 AI 应用边界，可以预见到，随着时间的推移，可能会有各式的 AI 相关的新生态持续出现并深刻影响人类的生活方式和整个人类社会的发展，我们判断，人工智能时代或已开始。

建议关注：视频图片应用：新国都、汉得信息、海康威视、大华股份；**模型：**商汤、云从科技、科大讯飞、三六零；**数据标注清洗：**博彦科技、海天瑞声；**算力芯片：**寒武纪、景嘉微、海光信息；**HBM：**国芯科技、澜起科技；**服务器：**神州数码、中科曙光、浪潮信息；**IDC：**宝信软件、润泽科技；**先进封装：**通富微电

风险提示：AI 技术发展不及预期。

表 1 3 月建议关注标的表现 (当月涨跌幅)

	股票代码	公司	截至 3.24 涨跌幅
1	688111.SH	金山办公	34.71%
2	688327.SH	云从科技-UW	25.21%
3	002230.SZ	科大讯飞	24.16%
4	600570.SH	恒生电子	6.76%
5	000977.SZ	浪潮信息	3.08%
6	688066.SH	航天宏图	1.54%
		平均	15.91%
		计算机	14.46%

资料来源: Wind, HTI

APPENDIX 1

Summary

- ChatGPT introduces plug-in functionality to help access the latest information, run calculations or use third-party services.
- NVIDIA Announces Several AI-Related Products and Services, We May Be in the "iPhone Moment" of AI
- AI is causing major changes to human society, and the era of artificial intelligence may have officially begun.
- The following areas are recommended to focus on: video picture applications; models; data labeling and cleaning; arithmetic chips; HBM; servers; IDC; advanced packaging
- Risk: AI technology development is not as expected.

附录 APPENDIX

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优于大市, 未来 12-18 个月内预期相对基准指数涨幅在 10% 以上, 基准定义如下

中性, 未来 12-18 个月内预期相对基准指数变化不大, 基准定义如下。根据 FINRA/NYSE 的评级分布规则, 我们会将中性评级划入持有这一类别。

弱于大市, 未来 12-18 个月内预期相对基准指数跌幅在 10% 以上, 基准定义如下

各地股票基准指数: 日本 – TOPIX, 韩国 – KOSPI, 台湾 – TAIEX, 印度 – Nifty100, 美国 – SP500; 其他所有中国概念股 – MSCI China.

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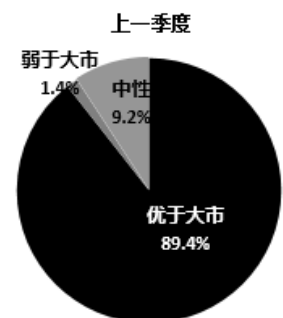
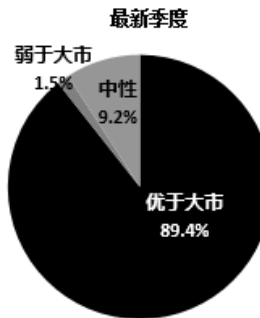
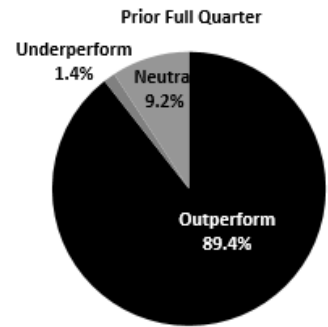
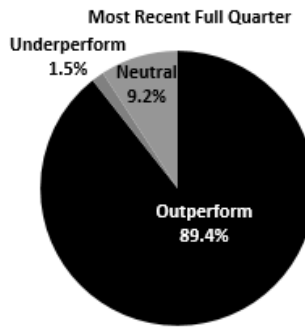
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截至 2022 年 12 月 31 日海通国际股票研究评级分布

	优于大市	中性 (持有)	弱于大市
海通国际股票研究覆盖率	89.4%	9.2%	1.5%
投资银行客户*	5.2%	7.3%	8.3%

*在每个评级类别里投资银行客户所占的百分比。

上述分布中的买入, 中性和卖出分别对应我们当前优于大市, 中性和落后大市评级。

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中性, 未来 12-18 个月内预期相对基准指数变化不大, 基准定义如下。根据 FINRA/NYSE 的评级分布规则, 我们会将中性评级划入持有这一类别。

卖出, 未来 12-18 个月内预期相对基准指数跌幅在 10% 以上, 基准定义如下

各地股票基准指数：日本 – TOPIX, 韩国 – KOSPI, 台湾 – TAIEX, 印度 – Nifty100; 其他所有中国概念股 – MSCI China.

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	Outperform	Neutral (hold)	Underperform
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IB clients*	5.2%	7.3%	8.3%

*Percentage of investment banking clients in each rating category.

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NEUTRAL: The stock's total return over the next 12-18 months is expected to be in line with the return of its relevant broad market benchmark, as indicated below. For purposes only of FINRA/NYSE ratings distribution rules, our Neutral rating falls into a hold rating category.

SELL: The stock's total return over the next 12-18 months is expected to be below the return of its relevant broad market benchmark, as indicated below.

Benchmarks for each stock's listed region are as follows: Japan – TOPIX, Korea – KOSPI, Taiwan – TAIEX, India – Nifty100; for all other China-concept stocks – MSCI China.

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