

计算机行业 2024 年 12 月研究观点：AI Agent 和推理模型持续发展，AI 落地快速推进中

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投资要点：

- **计算机行业 2024 年 11 月回顾。**2024 年 10 月 31 日-11 月 29 日，计算机（中信）指数从 5870 点上涨到 6156 点，涨幅 4.68%；上证指数从 3280 点上涨到 3326 点，涨幅 1.42%；沪深 300 从 3891 点上涨到 3917 点，涨幅 0.66%；创业板指从 2164 点上涨到 2224 点，涨幅 2.75%；科创 50 从 969 点上涨到 1007 点，涨幅 3.91%。
- **智谱发布多项 AI Agent 更新，实用性更进一步。**11 月 29 日，作为最早探索 Agent 的大模型企业之一，智谱带来了多个新进展。新升级的 AutoGLM 可以挑战完成复杂任务：**超长任务**：理解超长指令，执行超长任务，同时速度表现超过人手动操作。**跨 App**：AutoGLM 支持跨 App 执行任务。**短口令**：AutoGLM 支持长任务的自定义短语。**随便模式**：AutoGLM 可以主动帮用户做出决策。此外，智谱还带来基于 PC 的自主 Agent。GLM-PC 基于智谱的多模态模型 CogAgent，目前开放第一阶段的内测场景，包括：**会议替身**：帮用户预定和参与会议，发送会议总结。**文档处理**：支持文档下载、文档发送、理解和总结文档。**网页搜索与总结**：在指定平台（如微信公众号、小红书等）搜索指定关键词，完成阅读、总结。**远程和定时操作**：远程手机发指令，GLM-PC 可以自主完成电脑操作；设定一个未来时间，在开机状态下定时执行任务。**隐形屏幕**：在用户工作时，GLM-PC 可以在隐形屏幕上自主完成工作，解放屏幕使用权。智谱 CEO 张鹏表示，未来 GLM 团队将继续加速 agent 模型产品的研发，期待着一句话操作电脑和手机的范式尽快到来。我们认为，此次智谱的更新发布，是 AI Agent 在实用性上的重要一步，有望加速未来 AI Agent 在 C 端的应用落地和商业拓展。
- **国产推理模型陆续面世，我国大模型水平接近世界顶尖。**近期，国产推理模型陆续面世。11 月 17 日，月之暗面发布了 k0-math，这是 Kimi 推出的首款推理能力强化模型，采用了全新的强化学习和思维链推理技术，在多项数学基准能力测试中，k0-math 的表现能对标 OpenAI o1 系列可公开使用的两个模型：o1-mini 和 o1-preview。此外月之暗面还发布了 Kimi 探索版，其运用强化学习技术创新搜索体验，在三大推理能力上实现突破：**意图增强、信源分析和链式思考**。11 月 20 日，DeepSeek 发布全新研发的推理模型 DeepSeek-R1-Lite 预览版，DeepSeek R1 系列模型使用强化学习训练，推理过程包含大量反思和验证，思维链长度可达数万字。该系列模型在数学、代码以及各种复杂逻辑推理任务上，取得了媲美 o1-preview 的推理效果，并为用户展现了 o1 没有公开的完整思考过程。11 月 28 日，千问团队开源了会思考的 QwQ 模型，QwQ-32B-Preview 是由 Qwen 团队开发的实验性研究模型，专注于增强 AI 推理能力。QwQ 在分析和问题解决能力方面出现显著进步，尤其是在需要深度推理的技术领域。我们认为，OpenAI o1 9 月发布至今不到 3 个月的时间内，国产的推理模型已经陆续面世，而且在部分领域实现了对标 o1 系列的水平，这说明我国大模型水平已经接近世界顶尖，为未来 AI 在我国的落地奠定了坚实的技术基础。
- **教育部办公厅发文，目标 2030 年前在中小学基本普及人工智能教育。**根据广东省人工智能产业协会官网，教育部办公厅发布了《关于加强中小学人工智能教育的通知》（以下简称《通知》），《通知》强调了人工智能教育的总体要求，包括立德树人、全面发展、激发兴趣和鼓励探索以及统筹谋划和稳步推进等方面。同时，提出了六大主要任务和举措，包括构建系统化课程体系、实施常态化教学与评价、开发普适化教学资源、建设泛在化教学环境、推动规模化教师供给和组织多样化交流活动。通知专门指出：坚持统筹谋划，稳步推进。2030 年前在中小学基本普及人工智能教育。此外，《通知》还指出，要建设泛在化教学环境。各地要把建设多元化、高水平的中小学人工智能教育实验室作为数字校园建设的重要方向，统筹布局、均衡配置；要依托学校现有的数字化教学环境和设施设备，按人工智能教学要求升级优化，为学生提供人工智能体验、学习、探究、实践的空间。我们认为，《通知》的发布，一方面促进了 AI 教育在中小学的落地，另一方面也对教育信息化行业的发展起到了积极的促进作用。
- **12 月建议关注：**达梦数据、中科曙光、金山办公、恒生电子、新大陆、新致软件、万集科技、软通动力。**风险提示：**技术发展不及预期，公司业务拓展不及预期。

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海通计算机 2024 年 12 月建议关注

达梦数据：公司成立于 2015 年 12 月 17 日，长期致力于大数据平台、数据中心、数据治理、数据分析、数据可视化、数据库云服务系统等产品研发及行业推广工作，为用户提供大数据平台架构咨询、数据技术方案规划、产品部署与实施等服务。公司秉承“创新引领，质量为本，服务致胜”的企业愿景，以成为国内一流、行业领先的大数据企业为战略目标，围绕产品+解决方案，紧贴“大数据”、“云计算”的时代浪潮，持续技术创新，把握机遇，溯流而上，自成立以来，共获得 58 项产品著作权，18 项专利。建立了自己的 DMDQ 质量管理体系，通过了 ISO9001 质量认证，获得了 CMMI3 级证书、ITSS3 级证书、信息安全管理证书、信息技术服务管理体系认证证书，是经认定的全国科技型中小企业、高新技术企业、软件企业、国家鼓励的软件企业、专精特新中小企业、湖北省创新型中小企业、武汉市大数据企业、武汉市人工智能企业、武汉东湖企业信用促进会会员、光谷瞪羚企业、规上企业。风险提示：政策落地不及预期的风险。

中科曙光：经历 20 余年发展，中科曙光在高端计算、存储、安全、数据中心等领域拥有深厚的技术积淀和领先的市场份额，并充分发挥高端计算优势，布局智能计算、云计算、大数据等领域的技术研发，打造计算产业生态，为科研探索创新、行业信息化建设、产业转型升级、数字经济发展提供了坚实可信的支撑。中科曙光在全国各省、自治区和直辖市均设立了分支机构，拥有国际领先的 3 大智能制造生产基地、5 大研发中心，在全国 50 多个城市部署了城市云计算中心。作为以技术创新为基因的科技企业，中科曙光未来将持续专注于核心技术研发，并与用户、合作伙伴携手共建应用生态、推动产业进步，以科技创新助力“数字中国”建设，驱动经济高质量发展。风险提示：算力服务器需求不及预期的风险。

金山办公：公司是国内领先的办公软件和服务提供商，主要从事 WPS Office 办公软件相关产品及服务的设计研发及销售推广。公司主要产品包括 WPS Office 办公软件、金山文档等办公能力产品矩阵以及金山数字办公平台解决方案。其中 WPS Office 办公软件及金山文档等产品可在 Windows、Linux、Mac OS、Android、iOS、HarmonyOS 等众多主流操作平台上应用，主要服务包括基于公司产品为客户提供涉及日常办公和文档相关的增值功能、互联网广告推广等服务。金山数字办公平台可根据组织级客户需求以对应的赋能方式及交付模式为其提供一站式、多平台应用的解决方案或服务。公司拥有办公软件领域 30 余年研发经验及技术积累，旗下主要产品及服务皆由公司自主研发，对核心技术具有自主知识产权。公司重点针对文字排版技术、电子表格计算技术、动画渲染技术、在线协同编辑、安全文档以及数据协同共享等多种关键技术进行深入研究，通过核心技术的突破，打造了云和协作办公应用服务体系，创建智能办公新模式，全面提升用户体验。风险提示：行业需求不及预期的风险。

恒生电子：恒生电子是一家以“让金融变简单”为使命的金融科技公司，总部位于中国杭州。公司于 1995 年成立，2003 年在上海证券交易所主板上市，在北京、上海、深圳、武汉、南京以及香港、新加坡等地设有研发中心和子公司。恒生聚焦金融行业，致力于为证券、期货、基金、信托、保险、银行、交易所、私募等提供整体解决方案和服务。恒生已连续 17 年入选 FinTech100 全球金融科技百强榜单，2024 年排名第 22 位，位列亚洲上榜企业第一，拥有超过 12000 名员工，产品技术人员占比约 72.3%。恒生坚持以技术服务为核心，每年以 35% 以上营业收入投入研发，2022 年获批设立国家级博士后科研工作站。在企业发展的同时，恒生积极履行企业社会责任，2016 年成立浙江恒生电子公益基金会，2017 年投入运营恒生投资者教育基地，在投资者教育、扶贫济困、关爱自闭症儿童等贡献力量，实现企业与社会可持续发展。风险提示：行业市场环境波动的风险。

新大陆：新大陆科技集团 1994 年成立于福建省福州市，是长期从事科技创新和创新成果市场转化的高科技企业，旗下新大陆数字技术股份有限公司 2000 年于深交所主板上市。目前，集团员工总数近 8000 人，是国务院批准的大陆首家赴台投资企业。疫情期间，新大陆逆势出海，海外业绩屡创新高，产品和服务已覆盖全球上百个国家和地区。新大陆聚焦政府、行业、企业及社会的治理痛点，提供从硬件、软件、业务运营到数据运营的全场景数字化解决方案，多次主持或参与制定物联网、人工智能国家标准、行业标准，是全国唯一一家、全球仅有四家掌握二维码识读核心技术的企业，拥有全球首颗二维码解码芯片，拥有国家有效专利 600 多项、国外有效专利 9 项，软件著作权 1000 多项，另有在申请中专利 490 余项。多次主持或参与制定物联网、人工智能等领域的国家标准、行业标准，人脸识别算法技术全球领先。风险提示：行业需求不及预期的风险。

新致软件：新致软件成立于 1994 年，是国内领先的软件服务提供商。公司总部坐落于上海，在大连、北京、深圳、重庆、贵州、武汉、成都、广州、杭州、江苏、东京等多地设立了分支机构。公司主营业务包括向保险公司、银行等金融机构和其他行业终端客户提供科技服务，从事包括咨询规划、设计、开发、运维等软件开发服务，以及向一级软件承包商提供软件项目分包服务。公司依托 20 多年服务金融行业的实践经验，基于云机算、大数据、人工智能、区块链四大基础实验室的研发能力，为金融客户提供包括渠道、核心、数据、管理等全面的信息化解决方案，满足金融客户实现智能化、安全合规、业务多样化等需求，连续多年在中国保险业、银行业 IT 解决方案市场份额中占据领先地位。同时，公司的相关产品及服务已广泛应用于电信、医疗、汽车等诸多领域。多年积累的知识与经验，以及高质量的交付体系和一流的服务能力，新致软件已在业内树立了良好的企业形象与信用基础，赢得众多优质客户。其中包括中国太保、中国

人寿、中国人保、中国银行、工商银行、交通银行、建设银行、中国银联、中国电信、上海汽车、复星集团等行业龙头企业，品牌影响力进一步拓宽。风险提示：行业增速不及预期的风险。

万集科技：公司成立于 1994 年，是专业从事智能交通系统（ITS）技术研发、产品制造、技术服务的科技型企业。历经廿余载的研发积累和实践经验，公司在车联网、大数据、云平台、边缘计算及自动驾驶等多个领域积累了大量自主创新技术，开发了车路两端激光雷达、V2X 车路协同、智能网联路侧智能感知系统、智能网联云控平台、ETC、动态称重等多系列产品，为智慧高速、智慧城市提供全方面综合的解决方案、系统、产品及服务。公司在北京、武汉、深圳、苏州建立了四大研发中心，在北京顺义区建设了 42500 平米的现代化科研生产基地，拥有 CNAS 认证实验室和产品测试中心。公司在全国设立六大分子公司、事业部和 32 个地市级技术服务中心，凭借覆盖全国的营销服务网络体系、紧密支撑的研发生产机构，为客户提供实时、全面、高效、优质的服务。风险提示：政策落地不及预期的风险。

软通动力：公司是中国数字技术产品和服务创新领导企业，致力于成为具有全球影响力的数字技术服务领导企业，企业数字化转型可信赖合作伙伴。2005 年，公司成立于北京，立足中国，服务全球市场。目前，公司在全球 40 余个城市设有近百个分支机构，构建完善的全球“营销和交付”服务网络，员工近 90000 人。秉承用数字技术提升客户价值的使命，软通动力长期提供咨询与数字技术服务、计算产品与数字基础设施和数字能源与智算服务；凭借深厚的行业积累，公司在 10 余个重要行业服务超过 1100 家国内外客户，其中超过 230 家客户为世界 500 强或中国 500 强企业。风险提示：人力成本提高的风险。

风险提示

技术发展不及预期，公司业务拓展不及预期。

APPENDIX 1

Summary

Investment Highlights:

In November 2024, the computer industry index rose 4.68% from 5870 to 6156 points. The Shanghai Composite Index increased by 1.42%, CSI 300 by 0.66%, ChiNext Index by 2.75%, and STAR 50 by 3.91%.

Zhipu released AI Agent updates, enhancing practicality. The upgraded AutoGLM handles complex tasks, supports cross-App execution, and offers decision-making assistance. Zhipu also introduced PC-based autonomous agents, including meeting participation and document processing. CEO Zhang Peng aims for seamless computer and phone operations. This update marks a significant step in AI Agent practicality, potentially accelerating consumer applications and commercial expansion.

Domestic inference models are emerging, nearing world-class levels. On November 17, the k0-math model was released, matching OpenAI's o1 series. DeepSeek's R1-Lite model, released on November 20, excels in complex reasoning tasks. On November 28, the QwQ model was open-sourced, showing significant progress in technical reasoning. These developments indicate China's foundation models are approaching global standards, laying a solid technical foundation for AI deployment.

The Ministry of Education aims to popularize AI education in primary and secondary schools by 2030. The notice outlines six tasks, including curriculum development and teacher supply. It emphasizes building diverse AI education labs as part of digital campus construction. This promotes AI education and supports the educational informatization industry.

December recommendations: Beijing Wanji Technology, Dawning Information Industry, Beijing Kingsoft Office Software, Hundsun Technologies, Newland Digital Technology, Shanghai Newtown Software, Isoftstone Information Technology.

Risk Warning: Technology and business expansion may be weaker than expected.

附录 APPENDIX

重要信息披露

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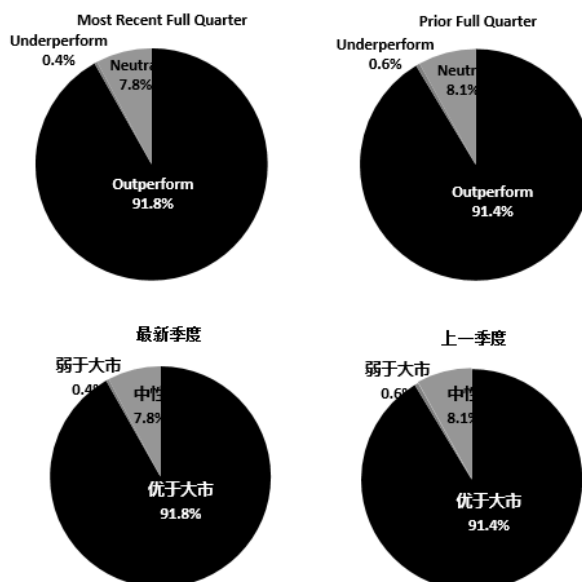
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Ratings Distribution



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