

## 基于AI的自主规划考研资讯网站

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**Abstract:** this paper mainly introduces the design and implementation of self planning postgraduate entrance examination website which combines ai artificial intelligence technology with web application form. On the student side, it can not only query information, but also have forum, open class, live broadcast module and other functions. In addition, the recommendation system is added to enable students to find the information they need faster. Through AI yellow detection and facial expression recognition, opencv is used to calculate the proportion of skin in the picture, and PIL is used to add watermark in the image to create health for students In the open class module, knbaseline algorithm is used, that is, the collaborative filtering algorithm based on articles and baseline rating is used. Tensorflow training data is used in the sharing center, and the content-based recommendation algorithm is used according to the user's requirements Behavior, including browsing, like, comments, forwarding and other characteristic data, to calculate the students' preferences and characteristics, and finally recommend the post. For the postgraduate entrance examination students, each person has his own circle of friends. Different administrators have different permissions. This website has been successfully deployed on windows server2012 R2 server, running stably, achieving the expected goal, and has certain practical value.

**Keywords:** AI Artificial Intelligence; Web; recommendation system; PIL;opencv; knbaseline algorithm; tensorflow training data.

### 1 引言

近年来, 考研报名人数不断趋高, 2020年考研人数达到340万左右。在这个人工智能高速发展的、数据量急速膨胀的时代, 考研不止是拼努力, 选择、运气, 信息获取的及时性也非常重要, 报考之前, 你搜集的信息, 则影响甚至决定了你报考的院校, 成绩出来后, 复试、调剂的信息则影响你能否顺利上岸。因此, 我们以推荐系统为依托, 开发一个“基于AI的自主规划考研资讯网站”, 为广大考研同学提供一个可以制定考研计划、分享资源、复习课程、直播等考研一站式服务网站。

### 2 系统的主要功能和实现

#### 2.1 学生端功能的实现

学生端的主要功能有学生邮箱注册后登录系统可制定个人考研计划(甘特图), 在资讯功能模块可以查看各种政策, 下载附件, 查看近期热点; 在信息库功能模块可以联合查看院校信息。在论坛功能模块可以联合模糊查询帖子信息, 上下翻页, 对帖子进行点赞、收藏、转载和评论, 也可查看帖子评论内容、评论人信息和发布人信息, 系统可根据用户行为推荐论坛信息。在公开课模块可联合模糊查询课程信息, 播放、购买、收藏和评论课程, 看教师直播, 也可查看已购买和已收藏的课程, 系统可根据用户行为推荐课程信息。在个人中心可扫脸签到、查看签到记录、对帖子进行管理, 查看我的喜欢、浏览历史、我的提醒、我的朋友圈、我的积分、我的订单, 设置个人基本信息, 退出登录。

#### 2.2 教师端功能的实现

教师端的主要功能有教师注册后登录系统可开直播, 在课程管理功能模块可上传课程资源, 上下架课程, 对课程信息进行增删改查。在个人中心可修改个人信息和修改密码, 也可根据数据可视化对课程相关信息进行分析。

#### 2.3 管理员端功能的实现

管理员端的主要功能有管理员登录后台可直接对用户、权限、资讯、公开课、论坛、日志等信息进行管理, 并可对数据库进行备份和管理。