

《人工智能高性能计算》大作业

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作业说明

- 1. 整体介绍
- 2. 数据准备
- 3. 工程结构
- 4. 实现效果

整体介绍

- 显示2008年-2017年中国GDP趋势情况
- 在中国地图上直观显示区域信息
- 支持按地域向下钻取数据
- 支持时间维度选择数据
- 支持按照GDP热度显示

数据准备

数据来源：国家统计局 (<http://data.stats.gov.cn/easyquery.htm?cn=E0103>)



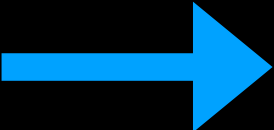
地区	2016年	2015年	2014年	2013年	2012年	2011年	2010年	2009年
北京市	25669.13	23014.69	21330.83	19900.81	17879.40	16251.93	14113.58	12153.03
天津市	17885.39	16538.19	15726.93	14442.01	12593.88	11307.25	9224.46	7521.85
河北省	32070.45	29806.11	29421.15	28442.95	26575.01	24515.76	20394.26	17235.48
山西省	13050.41	12766.49	12761.49	12665.25	12112.83	11237.55	9200.86	7358.31
内蒙古自治区	18128.10	17831.51	17770.19	16916.50	15880.58	14359.88	11672.00	9740.25
辽宁省	22246.90	20669.02	20626.58	27213.22	24846.43	22226.70	18457.27	15212.49
吉林省	14776.80	14063.13	13803.14	13046.40	11939.24	10568.83	8667.58	7278.75
黑龙江省	15386.09	15083.67	15039.38	14454.81	13691.58	12582.00	10398.60	8567.00
上海市	28178.65	25123.45	23567.70	21818.15	20181.72	19195.69	17195.98	15046.45
江苏省	77388.28	70116.98	65088.32	59753.37	54058.22	49110.27	41425.48	34457.30
浙江省	47251.36	42886.49	40173.03	37756.59	34995.93	32318.85	27722.31	22990.35
安徽省	24407.62	22005.69	20848.75	19229.34	17212.05	15300.65	12359.33	10062.82
福建省	28810.58	25979.82	24055.76	21868.49	19701.78	17560.18	14737.12	12236.53

数据准备

原始数据格式：csv

转换数据格式：JSON

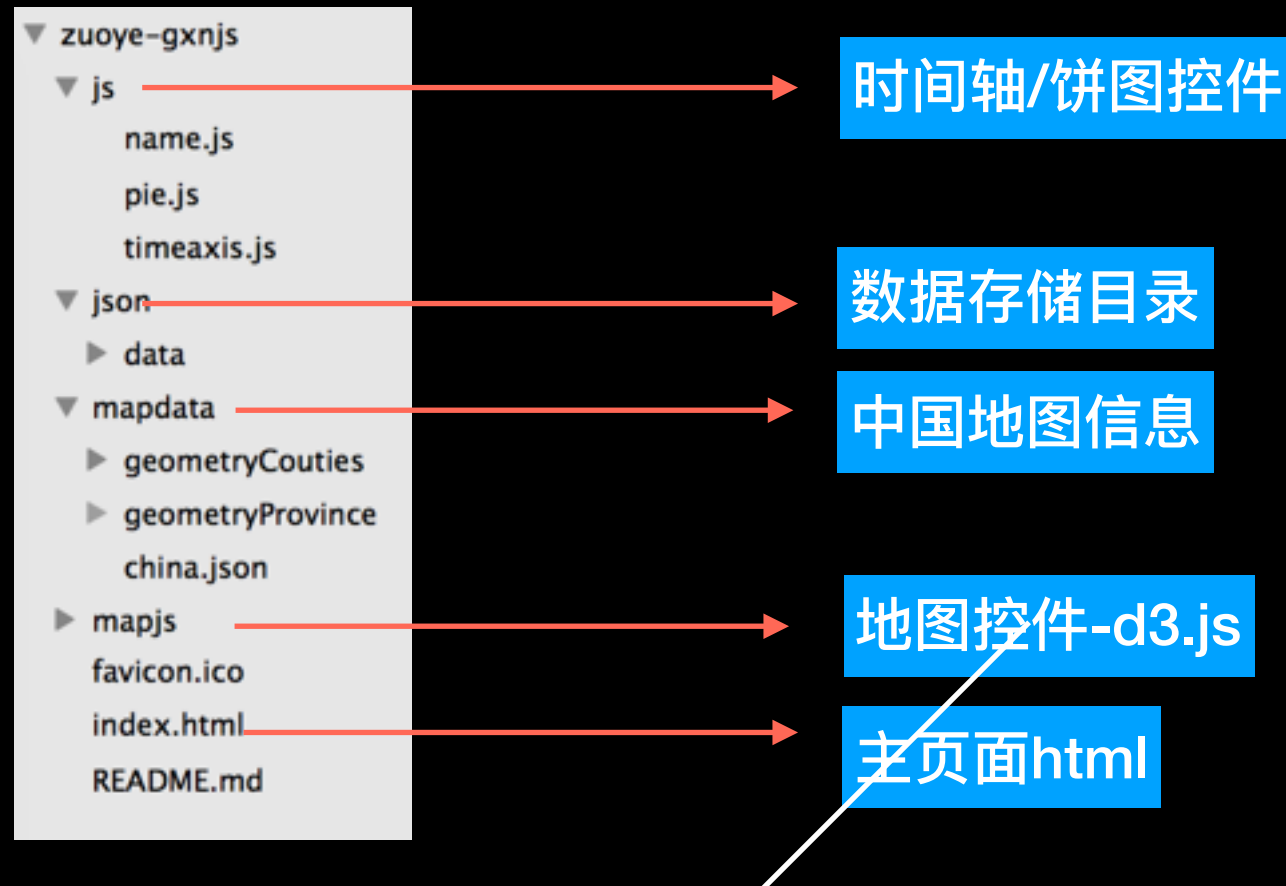
数据源：分省年度数据										
指标：地区生产总值(亿元)										
时间：最近20年										
地区	2016年	2015年	2014年	2013年	2012年	2011年	2010年	2009年	2008年	2007年
北京市	25966.13	23014.59	21330.83	19800.81	17879.4	16251.93	14111.58	12151.03	11115	9846.81
天津市	17886.29	16636.19	15726.93	14442.01	12893.88	11207.28	9824.46	7621.85	6719.01	5252.76
河北省	32070.45	29800.11	29421.15	28442.95	26571.01	24511.75	20884.25	17231.48	16011.97	13607.82
山西省	13010.41	12700.49	12700.49	12606.25	12112.83	11237.95	9800.95	7398.31	7305.4	6024.45
内蒙古自治区	18028.1	17831.51	17770.19	16818.8	16880.58	14288.88	11872	9740.25	8496.2	6428.18
辽宁省	22245.8	20988.02	20928.58	20213.22	20441.43	22128.7	18757.27	15211.49	13883.58	11194.3
吉林省	14775.8	14063.13	13803.14	13048.4	11551.24	10581.83	8857.58	7278.75	6426.1	5284.85
黑龙江省	15386.09	15063.67	15003.38	14454.01	13601.58	12582	10368.6	8587	8314.37	7104
上海市	28178.65	25123.45	23167.7	21818.15	20181.72	19191.69	17101.98	15043.45	14058.86	12484.01
江苏省	77386.28	73110.38	69086.32	69753.37	64063.22	48110.27	41421.48	34467.8	30681.98	26018.48
浙江省	47261.36	42880.48	40173.03	37750.69	34061.33	32318.85	27721.31	22590.35	21451.69	18753.73
安徽省	24407.62	22006.63	20846.75	19226.34	17212.05	16000.65	12609.33	10061.82	8851.66	7380.92
福建省	23810.55	22979.82	24065.78	21888.49	19701.79	17560.19	14757.12	12235.53	10623.01	9248.53
江西省	18499	16723.78	15714.83	14410.19	12948.89	11794.82	9461.28	7655.48	6971.05	5830.25
山东省	69024.40	63002.33	60426.50	55250.32	50011.24	45351.85	39151.02	33801.85	30231.28	25775.91
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广西壮族自治区	18017.64	16808.12	15672.89	14449.9	13085.1	11720.87	9569.85	7759.16	7021	5828.01
海南省	4053.2	3732.75	3530.72	3177.58	2855.54	2522.65	2064.5	1654.21	1503.06	1254.17



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工程结构

代码结构

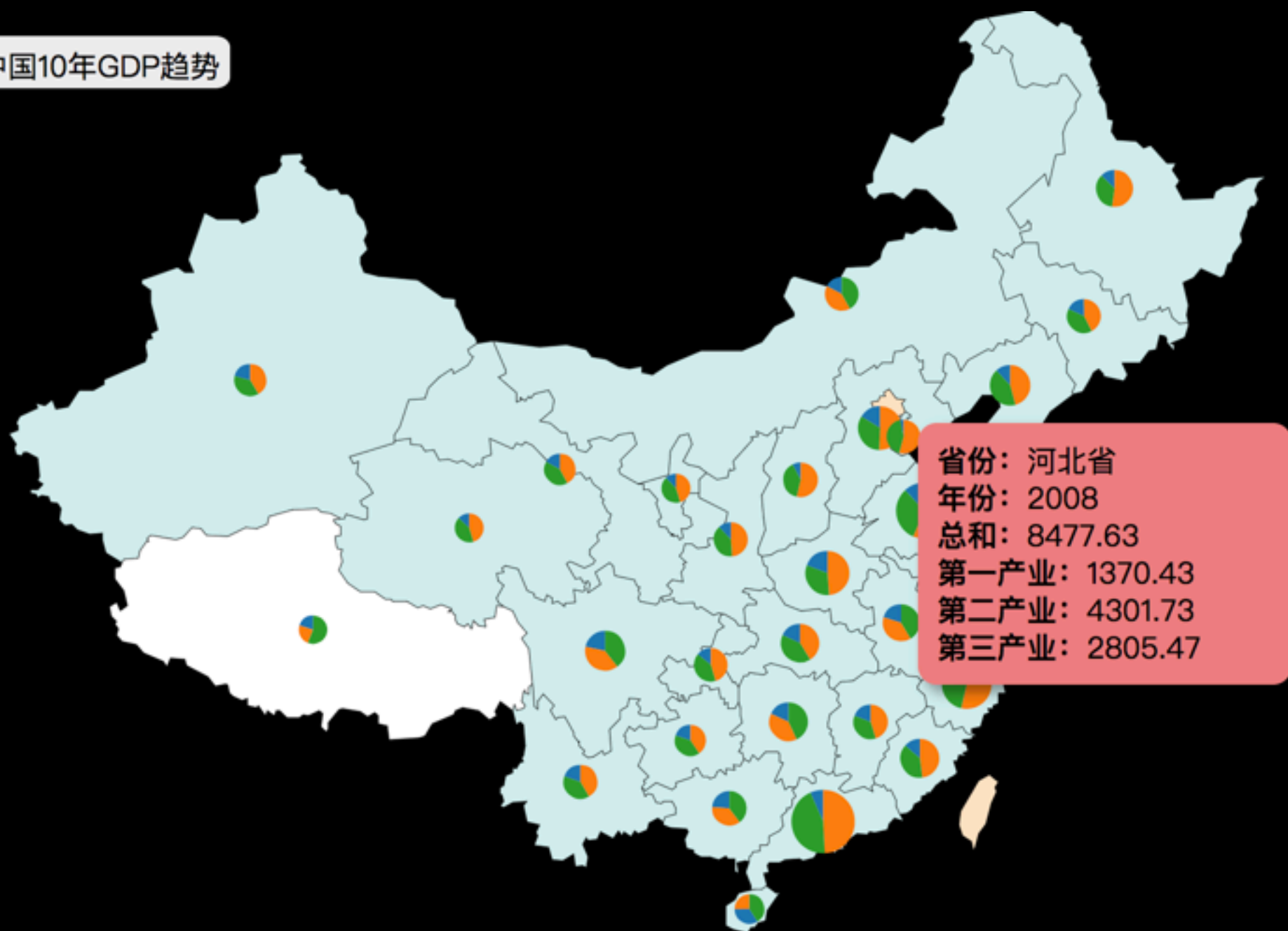


地理位置信息结构



实现效果：空间维度-中国分地域GDP显示

中国10年GDP趋势



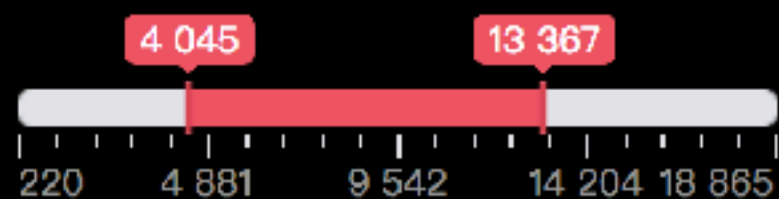
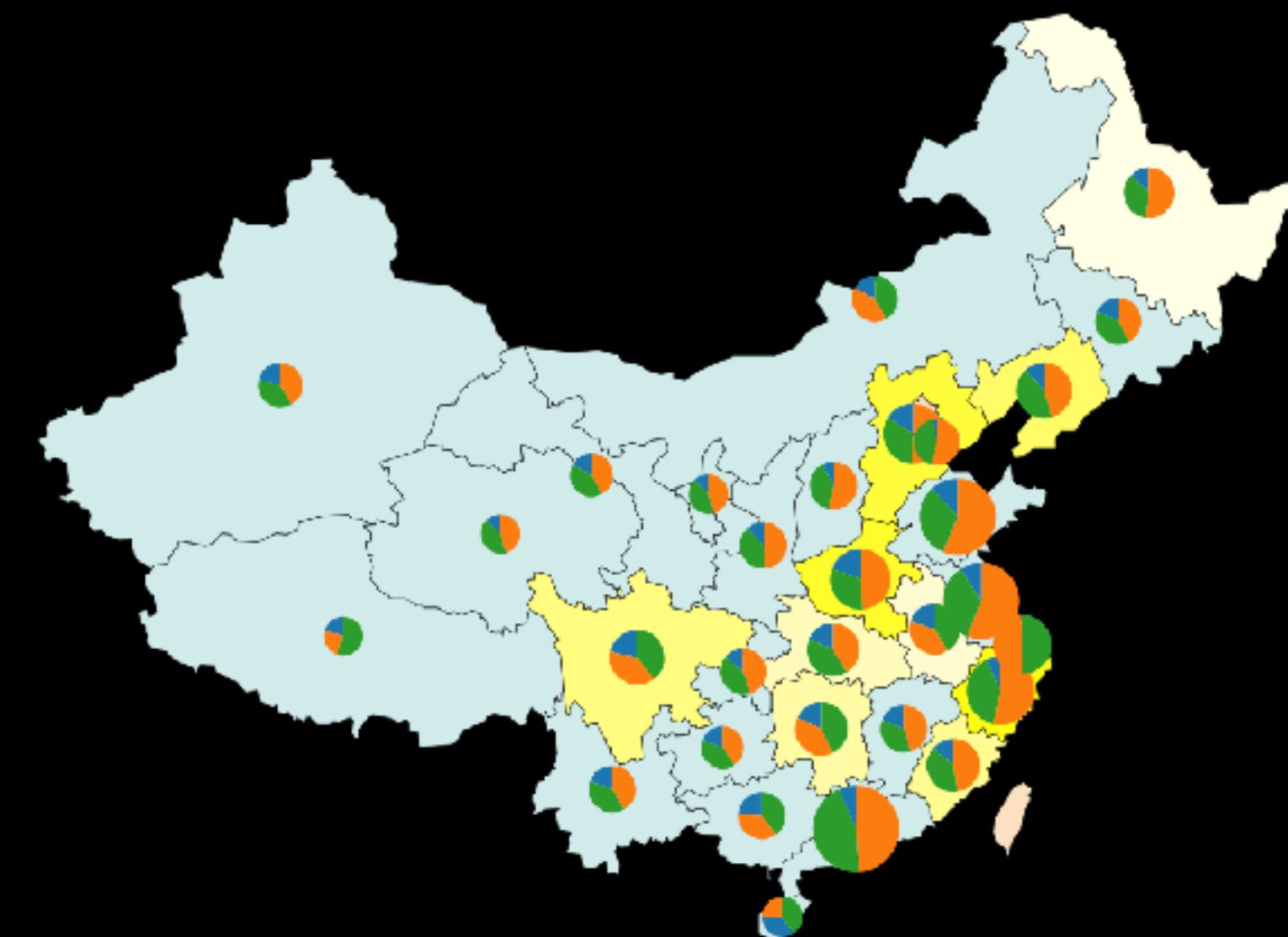
实现效果：空间维度-中国分地域GDP显示

中国10年GDP趋势



实现效果： 值域维度-区域筛选

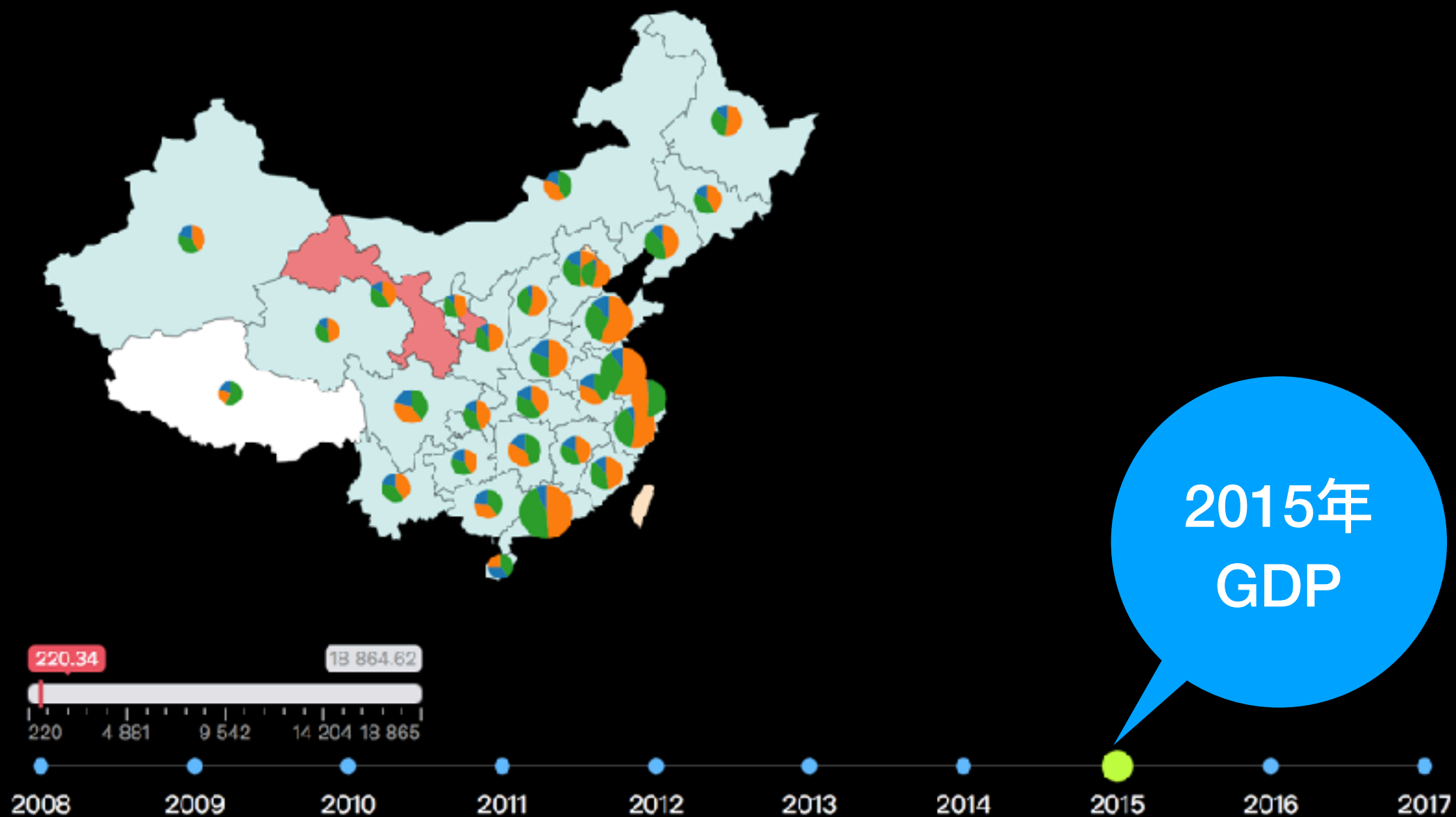
中国10年GDP趋势



GDP筛选器

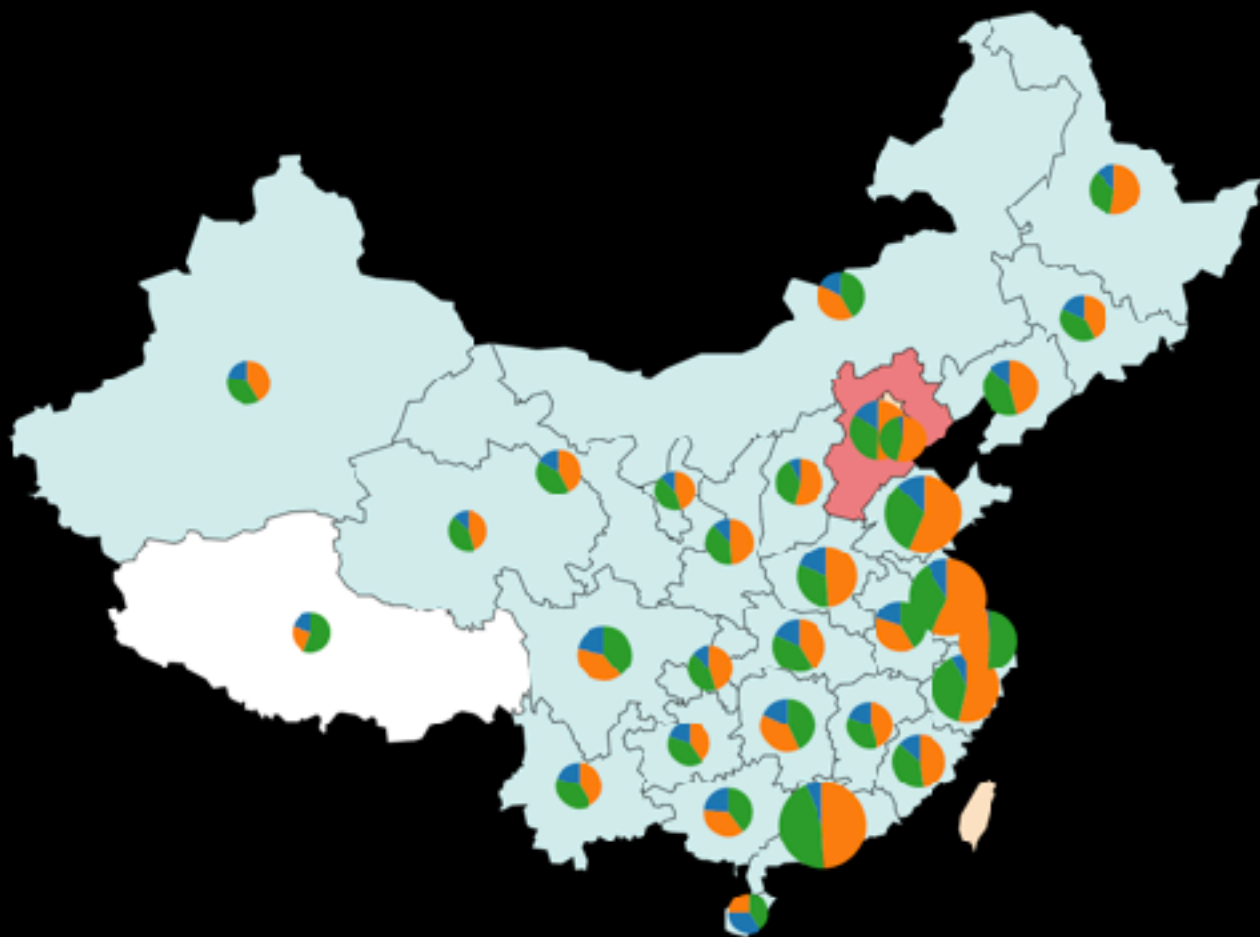
实现效果：时间维度-年度变化

中国10年GDP趋势



实现效果：空间维度-数据钻取

中国10年GDP趋势

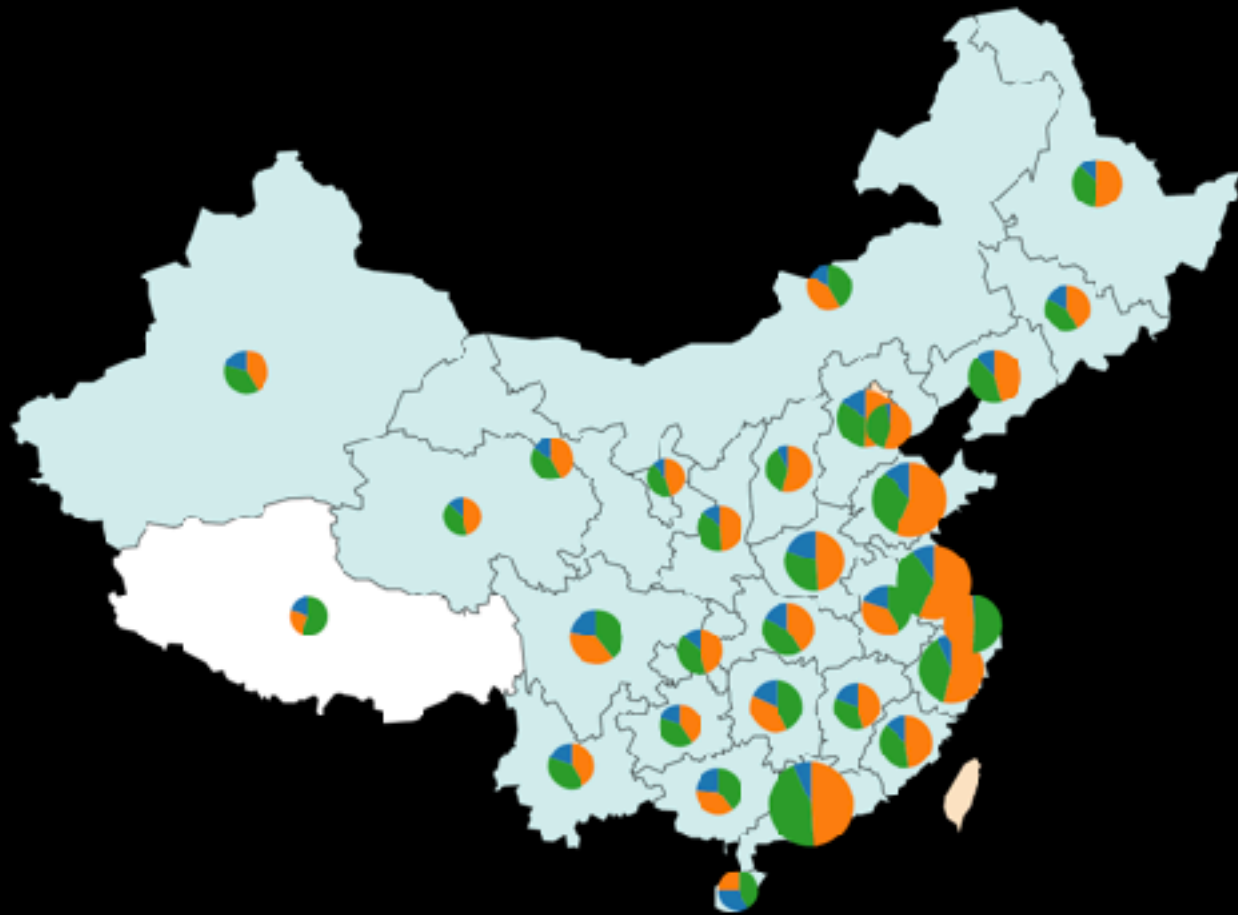


中国各个省、直辖市、自治区



河北省各个市

实现效果：空间维度-数据钻取



中国各个省、直辖市、自治区



石家庄市各个区县