



# League of Legends Overlay Assistant

## Project report 1

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# Project Progress

- **Champions portrait classification**
- **Champions attribute database & similarity matrix**
- **Others**



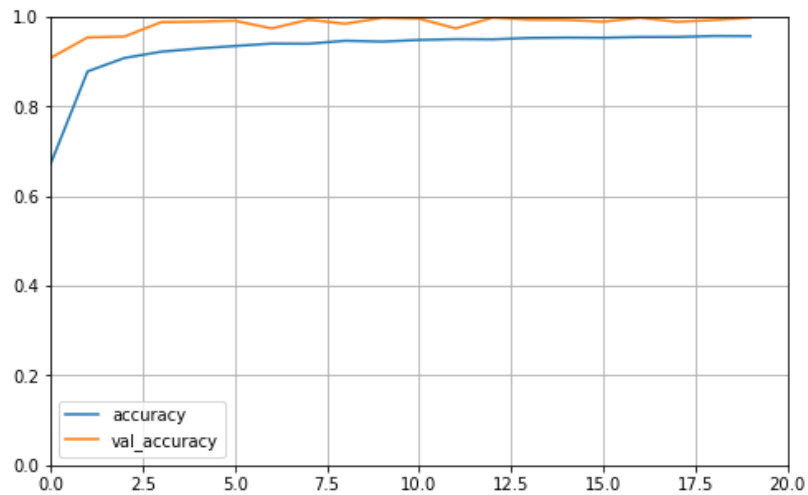
# Project Progress 1

## Champions portrait classification

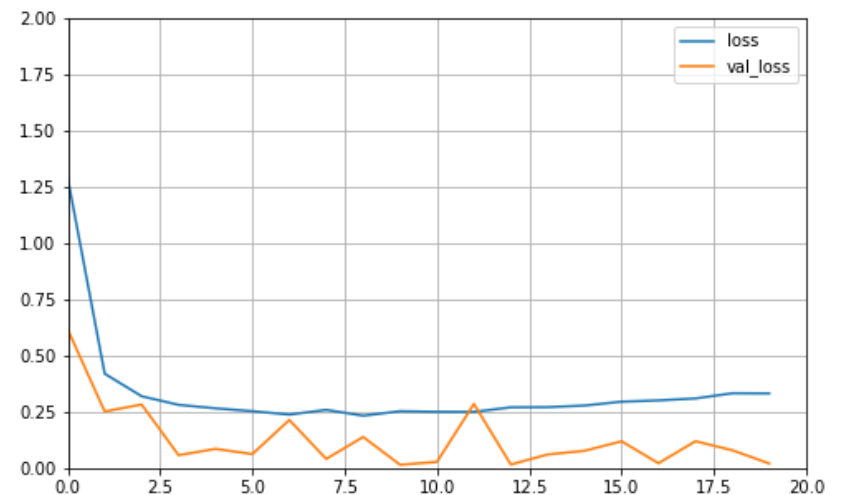
- Used database of 148 champions' portrait.
- Database size – 120,000 images(100,000 for training, 20,000 for testing)
- Recognized rate – 99%



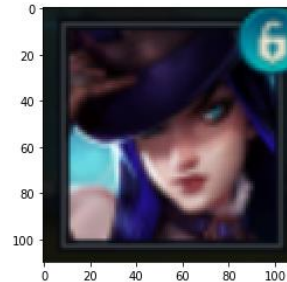
## Accuracy learning curves:



## Loss learning curves:



## Image example:





# Project Progress 2

## Champions attribute database & similarity matrix

- Crawled data of champion basic stats and their win rate to other champions from OP.GG and LOLWiki
- Used cosine similarity to generate similarity matrix of all champions. Will use this similarity to apply champion suggestion in project.



## Champion database

Rank	Champion	Role	Win Prcer	Play Prcer	Ban Rate	Playerbase	Kills	Deaths	Assists	Largest Kill	Damage D	Damage T	Total Heali	Minions Kil	Enemy Jun
1	Aphelios	ADC	48.16%	5.38%	6.22%	NaN	6.73	6.59	7.48	8	21020	17504	3311	174.7	2.32
2	Ashe	ADC	51.86%	3.41%	0.05%	5.22	5.95	6.04	9.54	7	18305	17701	2831	166.2	1.9
3	Caitlyn	ADC	48.12%	10.48%	1.81%	8.8	6.32	5.85	7.51	7	20086	17255	3299	176.9	1.81
4	Cassiopeia	ADC	51.66%	0.57%	1.03%	22.23	7.13	5.98	7.19	7	20797	22661	8301	178.8	2.55
5	Draven	ADC	49.73%	3.49%	0.96%	8.11	7.22	6.42	6.84	8	20392	18486	2163	175.8	2.6
6	Ezreal	ADC	48.93%	5.37%	0.09%	8.02	6.71	5.45	7.69	8	23152	17730	2492	171.2	1.74
7	Heimerdinger	ADC	51.22%	0.53%	0.08%	35.76	5.21	5.84	8.73	6	23833	15918	2367	165.9	1.14
8	Jhin	ADC	51.49%	7.49%	0.12%	9.36	7.05	5.49	8.84	8	20223	17410	3967	176.6	1.72
9	Jinx	ADC	49.78%	5.67%	0.05%	6.07	6.94	5.97	7.85	7	19974	17877	2711	182.5	2.59
10	Kai'Sa	ADC	45.60%	7.79%	0.22%	NaN	7.63	5.94	6.97	10	18542	17991	2713	176.4	2.17
11	Kalista	ADC	49.43%	0.69%	0.01%	4.86	8.04	6.39	7.34	6	18764	20927	4300	174.4	3.03
12	Kog'Maw	ADC	51.95%	0.58%	0.01%	4.73	8.28	6.88	7.63	8	26195	20349	3550	175.9	2.3
13	Lucian	ADC	49.97%	9.61%	0.32%	9.62	7.42	5.63	7.35	8	20094	19282	3010	183	2.76
14	Miss Fortune	ADC	52.49%	12.09%	0.96%	6.14	7.29	5.74	8.14	9	21175	17207	2119	185.1	2.24
15	Senna	ADC	52.93%	8.23%	2.68%	NaN	6.01	5.09	11.34	7	19579	16943	10217	154.8	1.07
16	Sivir	ADC	50.04%	1.27%	0.02%	3.58	6.06	5.62	9.05	7	19963	17867	2912	195.1	2.42
17	Taliyah	ADC	53.10%	0.59%	0.03%	27.42	8.09	6.15	9.25	7	23415	19310	5719	162.3	2.4

## Similarity matrix

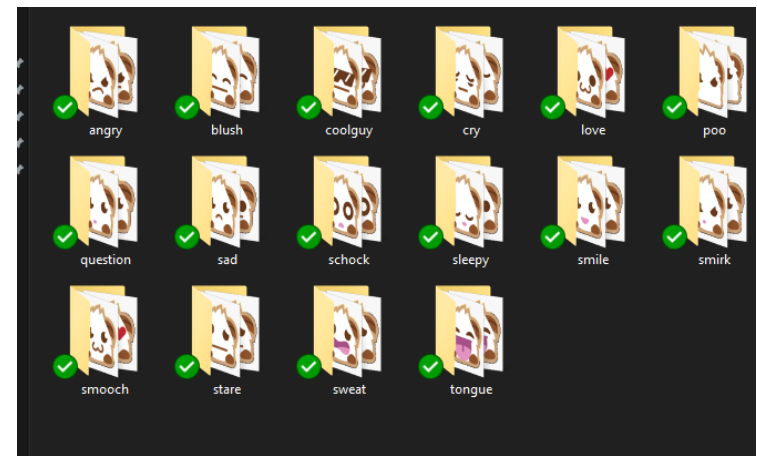
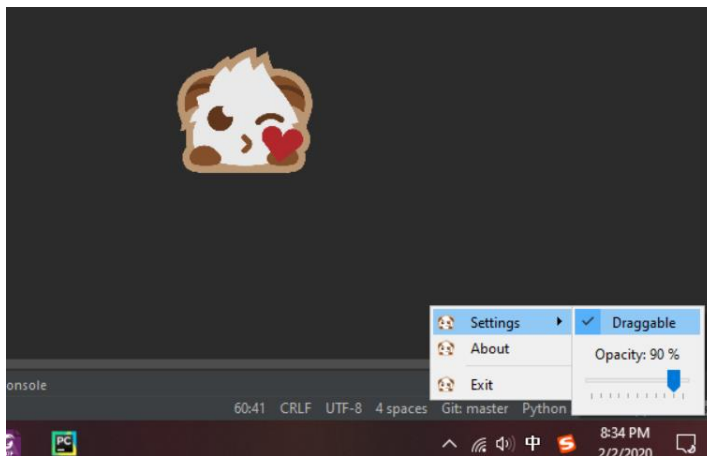
	Aatrox	Aatrox	Ahri	Akali	Akali	Alistar	Amumu	Anivia	Annie	Aphelios	Ashe	Ashe
Aatrox	1	0.935804	0.649801	0.955895	0.948954	0.751864	0.905554	0.891784	0.475513	0.528537	0.666674	0.59022
Aatrox	0.935804	1	0.396153	0.852092	0.847888	0.859565	0.934042	0.727612	0.173678	0.227126	0.376106	0.24482
Ahri	0.649801	0.396153	1	0.838895	0.845268	-0.16028	0.25849	0.879961	0.979288	0.987547	0.982419	0.934614
Akali	0.955895	0.852092	0.838895	1	0.999571	0.523174	0.771727	0.965718	0.714636	0.745885	0.831108	0.747329
Akali	0.948954	0.847888	0.845268	0.999571	1	0.506094	0.759897	0.964781	0.723496	0.752464	0.832688	0.745451
Alistar	0.751864	0.859565	-0.16028	0.523174	0.506094	1	0.932865	0.387948	-0.44954	-0.37133	-0.11671	-0.21562
Amumu	0.905554	0.934042	0.25849	0.771727	0.759897	0.932865	1	0.704931	0.036813	0.080998	0.298632	0.212832
Anivia	0.891784	0.727612	0.879961	0.965718	0.964781	0.387948	0.704931	1	0.796428	0.803141	0.897899	0.846676
Annie	0.475513	0.173678	0.979288	0.714636	0.723496	-0.44954	0.036813	0.796428	1	0.990048	0.962771	0.929108
Aphelios	0.528537	0.227126	0.987547	0.745885	0.752464	-0.37133	0.080998	0.803141	0.990048	1	0.975202	0.942691
Ashe	0.666674	0.376106	0.982419	0.831108	0.832688	-0.11671	0.298632	0.897899	0.962771	0.975202	1	0.98158
Ashe	0.59022	0.24482	0.934614	0.747329	0.745451	-0.21562	0.212832	0.846676	0.929108	0.942691	0.98158	1



# Project Progress 3

## UI

- Designed a draggable-suspended-Dynamic User Interface of our project App.





# Project Progress 3

## Preparing video material for next step



League of Legends 2020.01.31 -  
22.38.49.08.mp4



League of Legends 2020.01.31 -  
23.50.24.10.mp4



1.mp4



2.mp4



a1.mp4



Desktop 2020.02.01 - 00.18.10.11.mp4





**Thank you !**