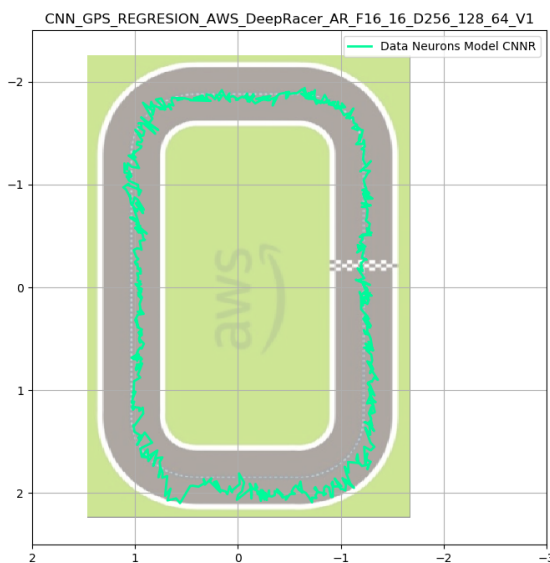
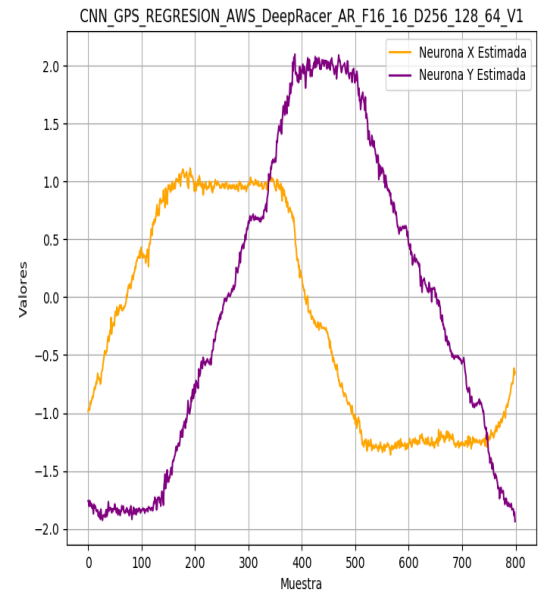


TABLA 30: Resultados obtenido a la salida de la red del modelo #2.

Nombre de archivo	Coordenada X	Coordenada Y	Neurona X	Neurona Y	Error Promedio
imagen9000.png	-1.01	-1.74	-0.960423767566681	-1.66950881481171	0.08617894181024
imagen9001.png	-0.99	-1.76	-0.987221777439117	-1.75995063781738	0.002778661048575
imagen9002.png	-0.97	-1.77	-0.964325189590454	-1.76759767532349	0.006162356451527
imagen9003.png	-0.96	-1.78	-0.973402261734009	-1.80515360832214	0.028501309289412
imagen9004.png	-0.94	-1.78	-0.969619870185852	-1.75848805904388	0.036607380588157
imagen9005.png	-0.93	-1.79	-0.903829395771027	-1.77656078338623	0.029419603479677
imagen9006.png	-0.91	-1.8	-0.925992608070374	-1.80306303501129	0.016283295009702
imagen9007.png	-0.9	-1.8	-0.897473275661469	-1.78308880329132	0.017098915462759
imagen9008.png	-0.89	-1.81	-0.885851263999939	-1.81764030456543	0.008694036131207
imagen9009.png	-0.87	-1.81	-0.86130827665329	-1.79740643501282	0.015301762441698
imagen9010.png	-0.86	-1.82	-0.866264939308167	-1.82778382301331	0.009991864952925
imagen9011.png	-0.84	-1.82	-0.84411084651947	-1.86981165409088	0.049980995812171
imagen9012.png	-0.83	-1.82	-0.804404377937317	-1.7906014919281	0.038979586268061
imagen9013.png	-0.82	-1.83	-0.780751645565033	-1.81462585926056	0.042152076216112
imagen9014.png	-0.8	-1.83	-0.792660653591156	-1.80173659324646	0.02920079052055
imagen9015.png	-0.78	-1.83	-0.772306621074677	-1.81540763378143	0.016496218692336
imagen9016.png	-0.77	-1.84	-0.732986092567444	-1.84312283992767	0.037145409846167
imagen9017.png	-0.75	-1.84	-0.747235298156738	-1.84955096244812	0.009943060895295
imagen9018.png	-0.73	-1.84	-0.702300846576691	-1.84506916999817	0.028159182957578
imagen9019.png	-0.72	-1.85	-0.658897757530212	-1.8398768901825	0.061935138550051



(A) Trayectoria obtenia por la CNN del modelo #2.



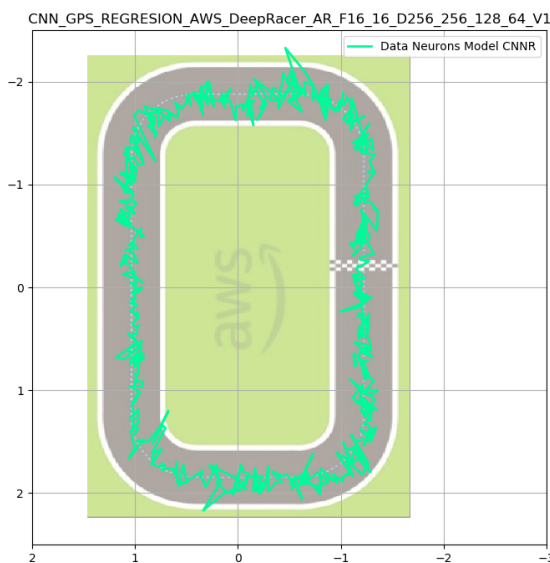
(B) Coordenadas X e Y estimadas.

FIGURA 62: Gráficas con las salidas de la CNN del modelo #2. Fuente: Autor.

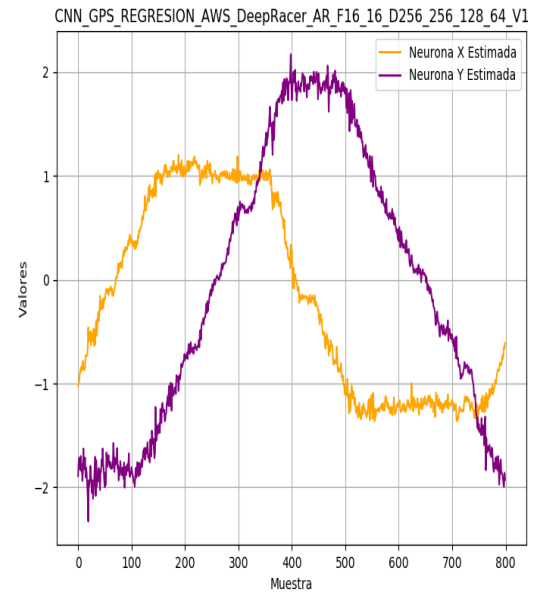
- **Modelo #3:**

TABLA 31: Resultados obtenido a la salida de la red del modelo #3.

Nombre de archivo	Coordenada X	Coordenada Y	Neurona X	Neurona Y	Error Promedio
imagen9000.png	-1.01	-1.74	-1.06599140167236	-1.86217176914215	0.134391138980808
imagen9001.png	-0.99	-1.76	-1.02311384677887	-1.88968813419342	0.133848940971025
imagen9002.png	-0.97	-1.77	-1.00380098819733	-1.76317930221558	0.034482295767282
imagen9003.png	-0.96	-1.78	-0.981401920318604	-1.71908962726593	0.064560945624481
imagen9004.png	-0.94	-1.78	-0.904857754707336	-1.75084483623505	0.045661810940555
imagen9005.png	-0.93	-1.79	-0.898354649543762	-1.828209400177	0.049612362041979
imagen9006.png	-0.91	-1.8	-0.849569916725159	-1.70039319992065	0.116504547493439
imagen9007.png	-0.9	-1.8	-0.875324606895447	-1.84092676639557	0.047789907223824
imagen9008.png	-0.89	-1.81	-0.834857702255249	-1.77730858325958	0.064104615505176
imagen9009.png	-0.87	-1.81	-0.864032626152039	-1.93533968925476	0.125481661023121
imagen9010.png	-0.86	-1.82	-0.785268545150757	-1.84853994846344	0.079995743650399
imagen9011.png	-0.84	-1.82	-0.852281987667084	-1.62824094295502	0.192151979380477
imagen9012.png	-0.83	-1.82	-0.86985719203949	-1.81924533843994	0.039864335832207
imagen9013.png	-0.82	-1.83	-0.867905616760254	-1.81120872497559	0.051459305613499
imagen9014.png	-0.8	-1.83	-0.845396637916565	-1.71548163890839	0.12318810722321
imagen9015.png	-0.78	-1.83	-0.732241034507751	-1.90213739871979	0.086514294072988
imagen9016.png	-0.77	-1.84	-0.73248964548111	-1.81228089332581	0.04664092163485
imagen9017.png	-0.75	-1.84	-0.736123859882355	-1.85447180271149	0.020049447331154
imagen9018.png	-0.73	-1.84	-0.727159678936005	-1.9675567150116	0.127588333981977
imagen9019.png	-0.72	-1.85	-0.654467582702637	-2.09169888496399	0.2504253355986



(A) Trayectoria obtenia por la CNN del modelo #3.



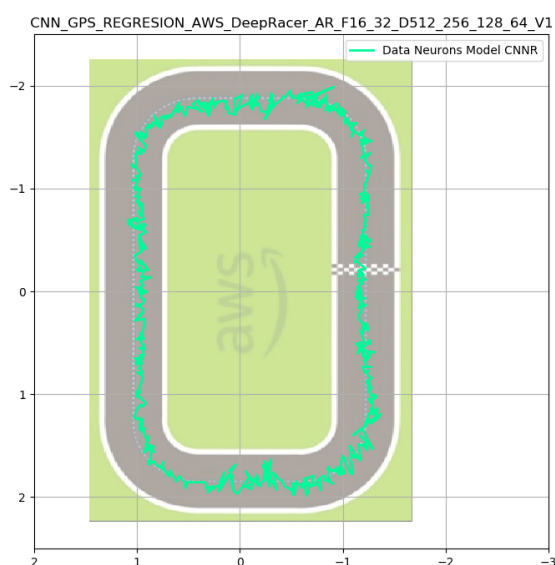
(B) Coordenadas X e Y estimadas.

FIGURA 63: Gráficas con las salidas de la CNN del modelo #3. Fuente: Autor.

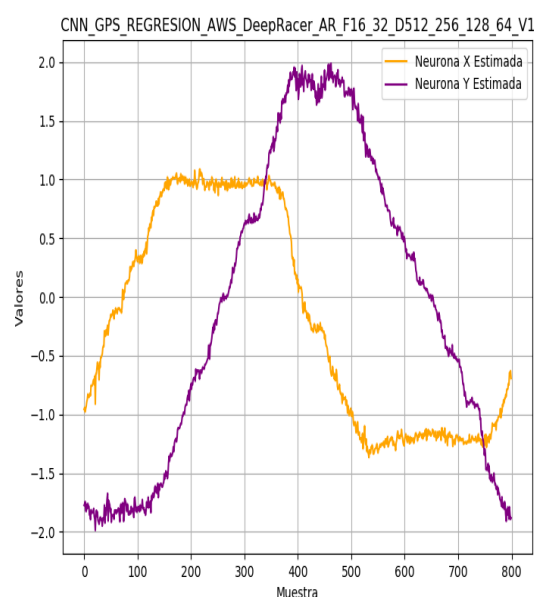
- **Modelo #4:**

TABLA 32: Resultados obtenido a la salida de la red del modelo #4.

Nombre de archivo	Coordenada X	Coordenada Y	Neurona X	Neurona Y	Error Promedio
imagen9000.png	-1.01	-1.74	-0.934311151504517	-1.57363653182983	0.182772003677199
imagen9001.png	-0.99	-1.76	-0.957176089286804	-1.77374446392059	0.035585381871948
imagen9002.png	-0.97	-1.77	-0.942349016666412	-1.76694881916046	0.027818817081787
imagen9003.png	-0.96	-1.78	-0.978441894054413	-1.74401104450226	0.040438946253984
imagen9004.png	-0.94	-1.78	-0.950241804122925	-1.8220911026001	0.043319227483698
imagen9005.png	-0.93	-1.79	-0.930220127105713	-1.8257257938385	0.035726471996739
imagen9006.png	-0.91	-1.8	-0.893372237682343	-1.76608824729919	0.037768895283462
imagen9007.png	-0.9	-1.8	-0.871949434280396	-1.80156624317169	0.028094258396739
imagen9008.png	-0.89	-1.81	-0.828560173511505	-1.76097977161408	0.078599205275528
imagen9009.png	-0.87	-1.81	-0.838807046413422	-1.78938138484955	0.037391545089457
imagen9010.png	-0.86	-1.82	-0.855750977993012	-1.78525972366333	0.034999156960762
imagen9011.png	-0.84	-1.82	-0.841362714767456	-1.85624420642853	0.036269815152151
imagen9012.png	-0.83	-1.82	-0.822435975074768	-1.83774375915527	0.019288739254546
imagen9013.png	-0.82	-1.83	-0.840183317661285	-1.89558231830597	0.068617831401187
imagen9014.png	-0.8	-1.83	-0.753607571125031	-1.81347560882568	0.049247466539924
imagen9015.png	-0.78	-1.83	-0.759524345397949	-1.84009861946106	0.022830561675127
imagen9016.png	-0.77	-1.84	-0.755419671535492	-1.84013426303864	0.014580946632386
imagen9017.png	-0.75	-1.84	-0.746457874774933	-1.83474588394165	0.006336591091799
imagen9018.png	-0.73	-1.84	-0.717068791389465	-1.82498586177826	0.0198151584064
imagen9019.png	-0.72	-1.85	-0.703373372554779	-1.80218923091888	0.05061930837467



(A) Trayectoria obtenia por la CNN del modelo #4.



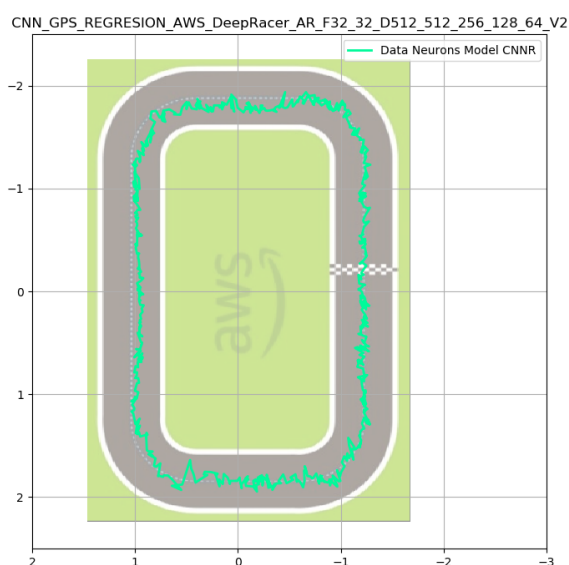
(B) Coordenadas X e Y estimadas.

FIGURA 64: Gráficas con las salidas de la CNN del modelo #4. Fuente: Autor.

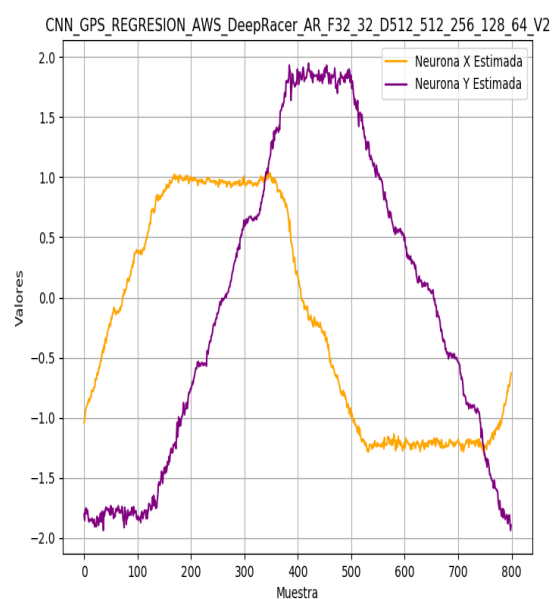
- **Modelo #5:**

TABLA 33: Resultados obtenido a la salida de la red del modelo #5.

Nombre de archivo	Coordenada X	Coordenada Y	Neurona X	Neurona Y	Error Promedio
imagen9000.png	-1.01	-1.74	-1.0718104839325	-1.74840843677521	0.062379786253016
imagen9001.png	-0.99	-1.76	-1.04089248180389	-1.80354654788971	0.066980195112215
imagen9002.png	-0.97	-1.77	-1.01417922973633	-1.85342371463776	0.094399790805155
imagen9003.png	-0.96	-1.78	-0.97257936000824	-1.77980875968933	0.012580813609355
imagen9004.png	-0.94	-1.78	-0.932773172855377	-1.75659549236298	0.024494856772591
imagen9005.png	-0.93	-1.79	-0.921405673027039	-1.75376510620117	0.037240166282262
imagen9006.png	-0.91	-1.8	-0.904383480548858	-1.79946088790894	0.005642333966701
imagen9007.png	-0.9	-1.8	-0.896352648735046	-1.76707434654236	0.033127055813379
imagen9008.png	-0.89	-1.81	-0.871601581573486	-1.79444766044617	0.024091016296429
imagen9009.png	-0.87	-1.81	-0.867674052715302	-1.84002888202667	0.030118827775048
imagen9010.png	-0.86	-1.82	-0.843533873558044	-1.86602425575256	0.048881135804928
imagen9011.png	-0.84	-1.82	-0.865687727928162	-1.84993016719818	0.039442036897482
imagen9012.png	-0.83	-1.82	-0.845673203468323	-1.84630751609802	0.03062245434656
imagen9013.png	-0.82	-1.83	-0.826779961585999	-1.85750353336334	0.028326881695239
imagen9014.png	-0.8	-1.83	-0.829308032989502	-1.85354149341583	0.037592056474227
imagen9015.png	-0.78	-1.83	-0.776229381561279	-1.84714496135712	0.017554693484862
imagen9016.png	-0.77	-1.84	-0.778902053833008	-1.83803510665894	0.009116324275031
imagen9017.png	-0.75	-1.84	-0.773166179656982	-1.87094438076019	0.03865522707903
imagen9018.png	-0.73	-1.84	-0.779945492744446	-1.87431120872498	0.060595472517791
imagen9019.png	-0.72	-1.85	-0.753799080848694	-1.88123035430908	0.046018614673709



(A) Trayectoria obtenia por la CNN del modelo #5.



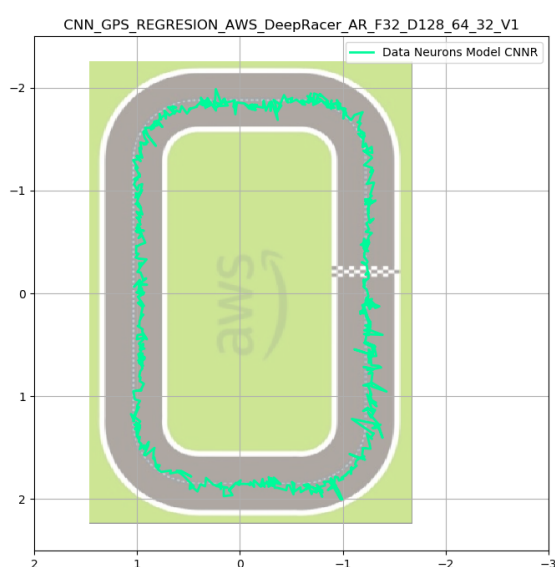
(B) Coordenadas X e Y estimadas.

FIGURA 65: Gráficas con las salidas de la CNN del modelo #5. Fuente: Autor.

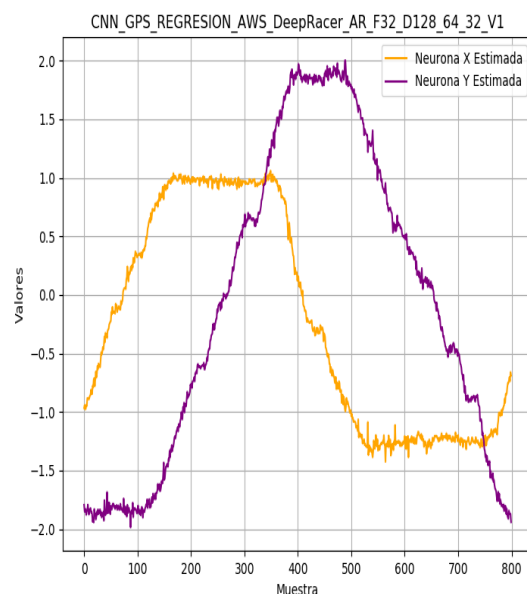
- **Modelo #7:**

TABLA 34: Resultados obtenido a la salida de la red del modelo #7.

Nombre de archivo	Coordenada X	Coordenada Y	Neurona X	Neurona Y	Error Promedio
imagen9000.png	-1.01	-1.74	-0.998374044895172	-1.92485558986664	0.185220819394155
imagen9001.png	-0.99	-1.76	-0.966473698616028	-1.79462993144989	0.041865487087022
imagen9002.png	-0.97	-1.77	-0.942472994327545	-1.85106611251831	0.085612210812026
imagen9003.png	-0.96	-1.78	-0.975560903549194	-1.84340178966522	0.065283448530392
imagen9004.png	-0.94	-1.78	-0.974099457263946	-1.83031713962555	0.060783118756713
imagen9005.png	-0.93	-1.79	-0.942633628845215	-1.87837195396423	0.089270436457179
imagen9006.png	-0.91	-1.8	-0.950179994106293	-1.84657156467438	0.061508881981397
imagen9007.png	-0.9	-1.8	-0.882971346378326	-1.84106373786926	0.044454534211512
imagen9008.png	-0.89	-1.81	-0.886796534061432	-1.79295599460602	0.01734244255835
imagen9009.png	-0.87	-1.81	-0.881547629833221	-1.83815848827362	0.030434326288268
imagen9010.png	-0.86	-1.82	-0.89152592420578	-1.87580835819244	0.064097244411634
imagen9011.png	-0.84	-1.82	-0.877088963985443	-1.83301901817322	0.039307583030607
imagen9012.png	-0.83	-1.82	-0.861339271068573	-1.83470833301544	0.034619141687839
imagen9013.png	-0.82	-1.83	-0.854527950286865	-1.82244122028351	0.035345643321556
imagen9014.png	-0.8	-1.83	-0.81129378080368	-1.85841989517212	0.030581692667932
imagen9015.png	-0.78	-1.83	-0.840929329395294	-1.85158050060272	0.064638233166017
imagen9016.png	-0.77	-1.84	-0.846851527690887	-1.87667942047119	0.085155958068274
imagen9017.png	-0.75	-1.84	-0.776882290840149	-1.93803119659424	0.101650248728237
imagen9018.png	-0.73	-1.84	-0.791200637817383	-1.91691482067108	0.098292460077664
imagen9019.png	-0.72	-1.85	-0.721382677555084	-1.94264566898346	0.092655986199565



(A) Trayectoria obtenia por la CNN del modelo #7.



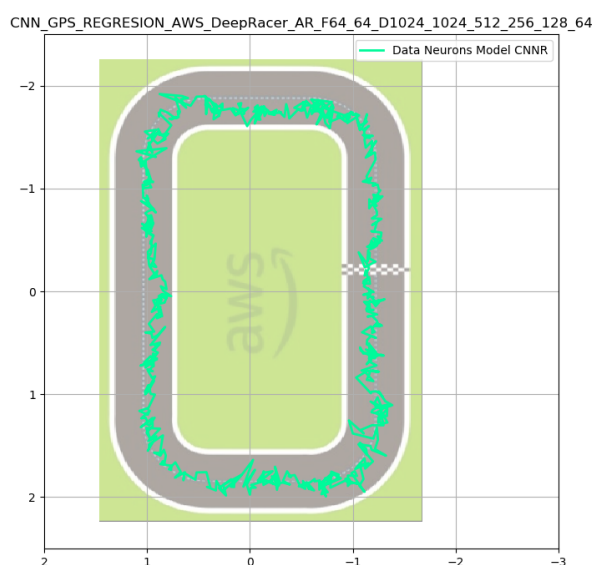
(B) Coordenadas X e Y estimadas.

FIGURA 66: Gráficas con las salidas de la CNN del modelo #7. Fuente: Autor.

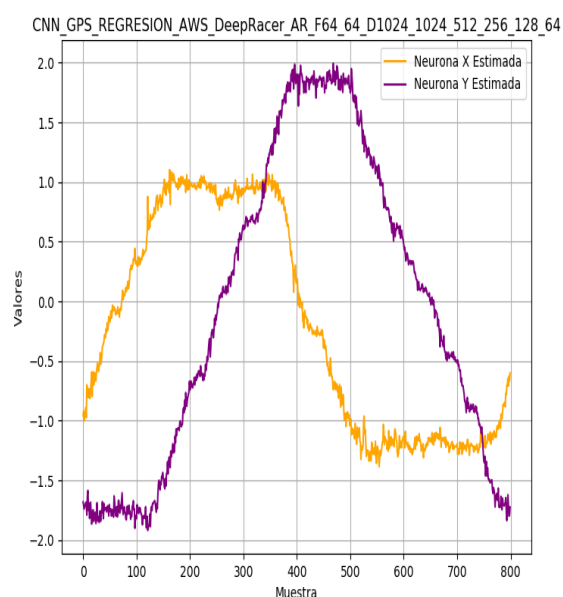
- **Modelo #8:**

TABLA 35: Resultados obtenido a la salida de la red del modelo #8.

Nombre de archivo	Coordenada X	Coordenada Y	Neurona X	Neurona Y	Error Promedio
imagen9000.png	-1.01	-1.74	-1.1142805814743	-1.6152663230896	0.162582071053997
imagen9001.png	-0.99	-1.76	-0.956823348999023	-1.6824586391449	0.084340694892216
imagen9002.png	-0.97	-1.77	-0.919762551784515	-1.71177887916565	0.076899285526015
imagen9003.png	-0.96	-1.78	-0.999599397182465	-1.73872458934784	0.057199403683248
imagen9004.png	-0.94	-1.78	-0.947503387928009	-1.72223424911499	0.058251032657861
imagen9005.png	-0.93	-1.79	-0.944237053394318	-1.70307266712189	0.088085497618251
imagen9006.png	-0.91	-1.8	-0.89192932844162	-1.68619906902313	0.115226737616634
imagen9007.png	-0.9	-1.8	-0.972618699073792	-1.69144773483276	0.130602717154383
imagen9008.png	-0.89	-1.81	-0.701379656791687	-1.78895723819733	0.189790494220089
imagen9009.png	-0.87	-1.81	-0.734096169471741	-1.63541090488434	0.221249188214464
imagen9010.png	-0.86	-1.82	-0.776645839214325	-1.58626651763916	0.24815168122906
imagen9011.png	-0.84	-1.82	-0.804169416427612	-1.75143146514893	0.077365849641562
imagen9012.png	-0.83	-1.82	-0.733811616897583	-1.69028902053833	0.161484188813528
imagen9013.png	-0.82	-1.83	-0.801261484622955	-1.81725370883942	0.022662742483779
imagen9014.png	-0.8	-1.83	-0.812638461589813	-1.78398871421814	0.047715501995234
imagen9015.png	-0.78	-1.83	-0.751573622226715	-1.68473780155182	0.148017449144715
imagen9016.png	-0.77	-1.84	-0.682720422744751	-1.76656138896942	0.114065569721786
imagen9017.png	-0.75	-1.84	-0.594541013240814	-1.86493277549744	0.157445672719825
imagen9018.png	-0.73	-1.84	-0.796508491039276	-1.840940117836	0.066515135133795
imagen9019.png	-0.72	-1.85	-0.663189888000488	-1.751389503479	0.113804300663527



(A) Trayectoria obtenia por la CNN del modelo #8.



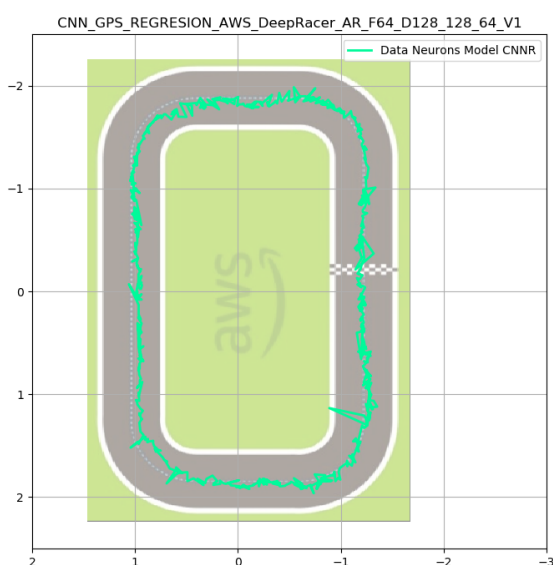
(B) Coordenadas X e Y estimadas.

FIGURA 67: Gráficas con las salidas de la CNN del modelo #8. Fuente: Autor.

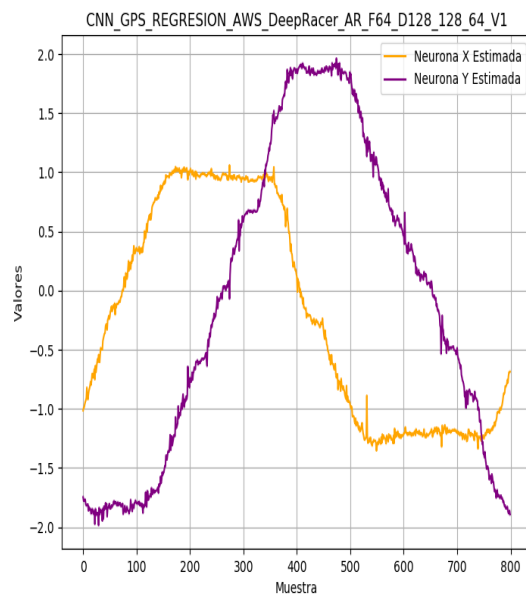
- **Modelo #10:**

TABLA 36: Resultados obtenido a la salida de la red del modelo #10.

Nombre de archivo	Coordenada X	Coordenada Y	Neurona X	Neurona Y	Error Promedio
imagen9000.png	-1.01	-1.74	-1.0147625207901	-1.74867212772369	0.009893806321745
imagen9001.png	-0.99	-1.76	-1.01389002799988	-1.74687588214874	0.0272575843979
imagen9002.png	-0.97	-1.77	-0.991603672504425	-1.77896583080292	0.023390271218286
imagen9003.png	-0.96	-1.78	-0.98767215013504	-1.77961564064026	0.027674819334797
imagen9004.png	-0.94	-1.78	-0.96268755197525	-1.76672554016113	0.026285667171357
imagen9005.png	-0.93	-1.79	-0.943297863006592	-1.76772010326386	0.025946617488902
imagen9006.png	-0.91	-1.8	-0.929618060588837	-1.80868029594421	0.021452641770803
imagen9007.png	-0.9	-1.8	-0.909250855445862	-1.81806516647339	0.02029602340833
imagen9008.png	-0.89	-1.81	-0.820774018764496	-1.81707274913788	0.069586351092623
imagen9009.png	-0.87	-1.81	-0.899451017379761	-1.80774819850922	0.029536977412336
imagen9010.png	-0.86	-1.82	-0.920787692070007	-1.80747973918915	0.062063680506153
imagen9011.png	-0.84	-1.82	-0.876853406429291	-1.86114513874054	0.055236726979617
imagen9012.png	-0.83	-1.82	-0.843273818492889	-1.82919943332672	0.016150041204745
imagen9013.png	-0.82	-1.83	-0.827209532260895	-1.85566747188568	0.026660766463534
imagen9014.png	-0.8	-1.83	-0.803319871425629	-1.84247362613678	0.012907861762618
imagen9015.png	-0.78	-1.83	-0.770782589912415	-1.85283267498016	0.024622991196695
imagen9016.png	-0.77	-1.84	-0.797113358974457	-1.88671159744263	0.054010254308972
imagen9017.png	-0.75	-1.84	-0.754769444465637	-1.86265850067139	0.023155026520953
imagen9018.png	-0.73	-1.84	-0.703027307987213	-1.84678316116333	0.027812540153398
imagen9019.png	-0.72	-1.85	-0.711472928524017	-1.85114419460297	0.008603495176146



(A) Trayectoria obtenia por la CNN del modelo #10.



(B) Coordenadas X e Y estimadas.

FIGURA 68: Gráficas con las salidas de la CNN del modelo #10. Fuente: Autor.