

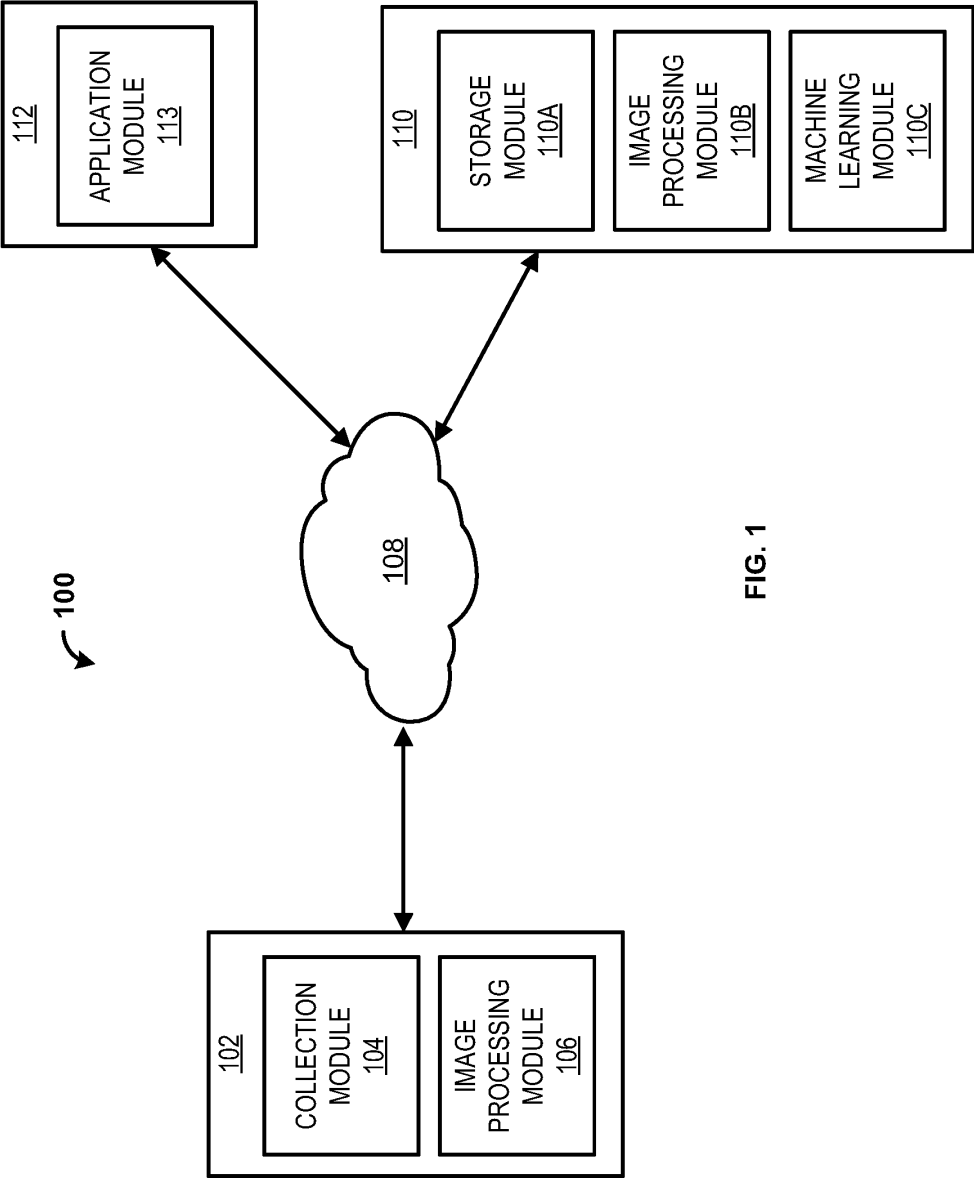


FIG. 1

FIG. 2

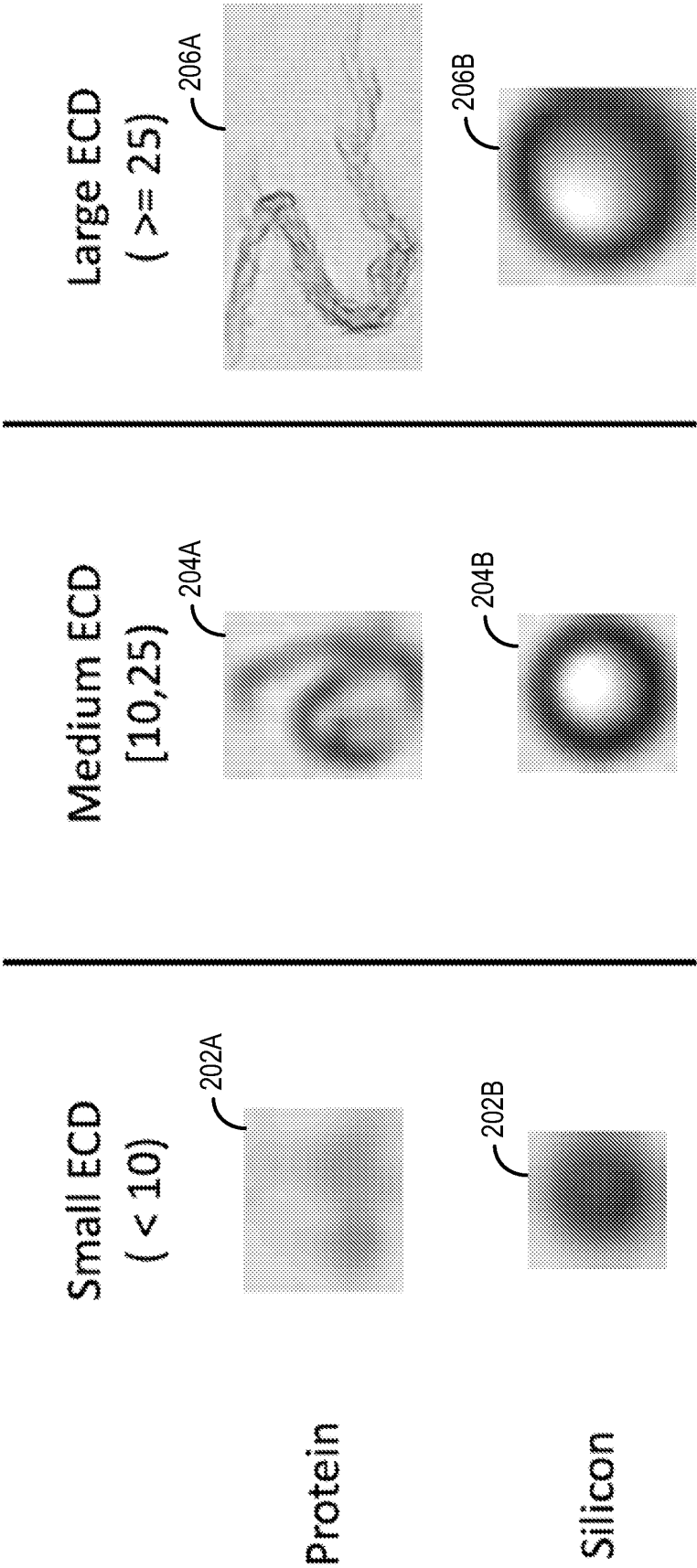


FIG. 3A

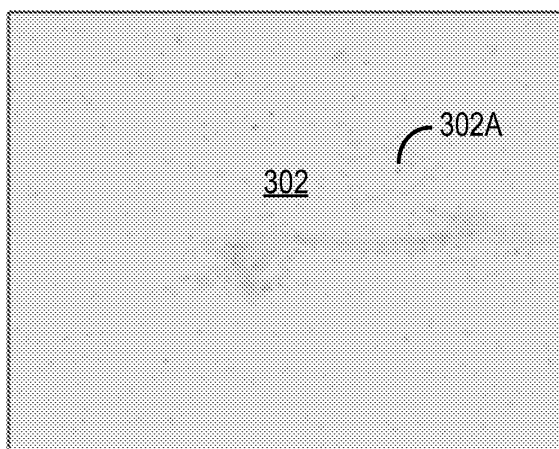
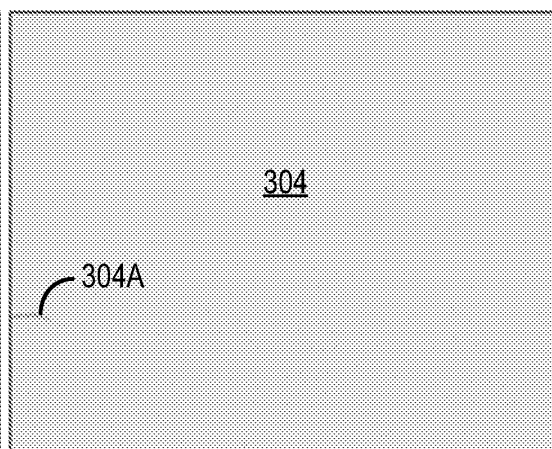


FIG. 3B



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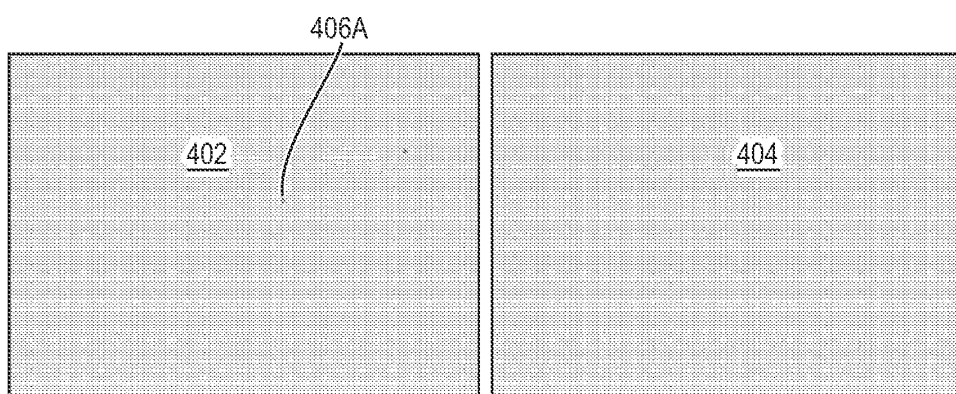
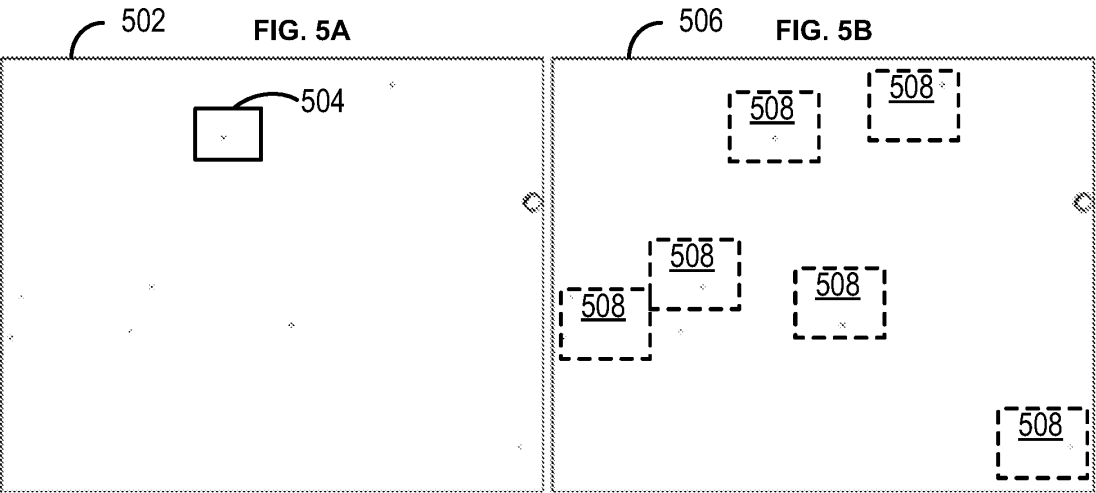


FIG. 4A

FIG. 4B



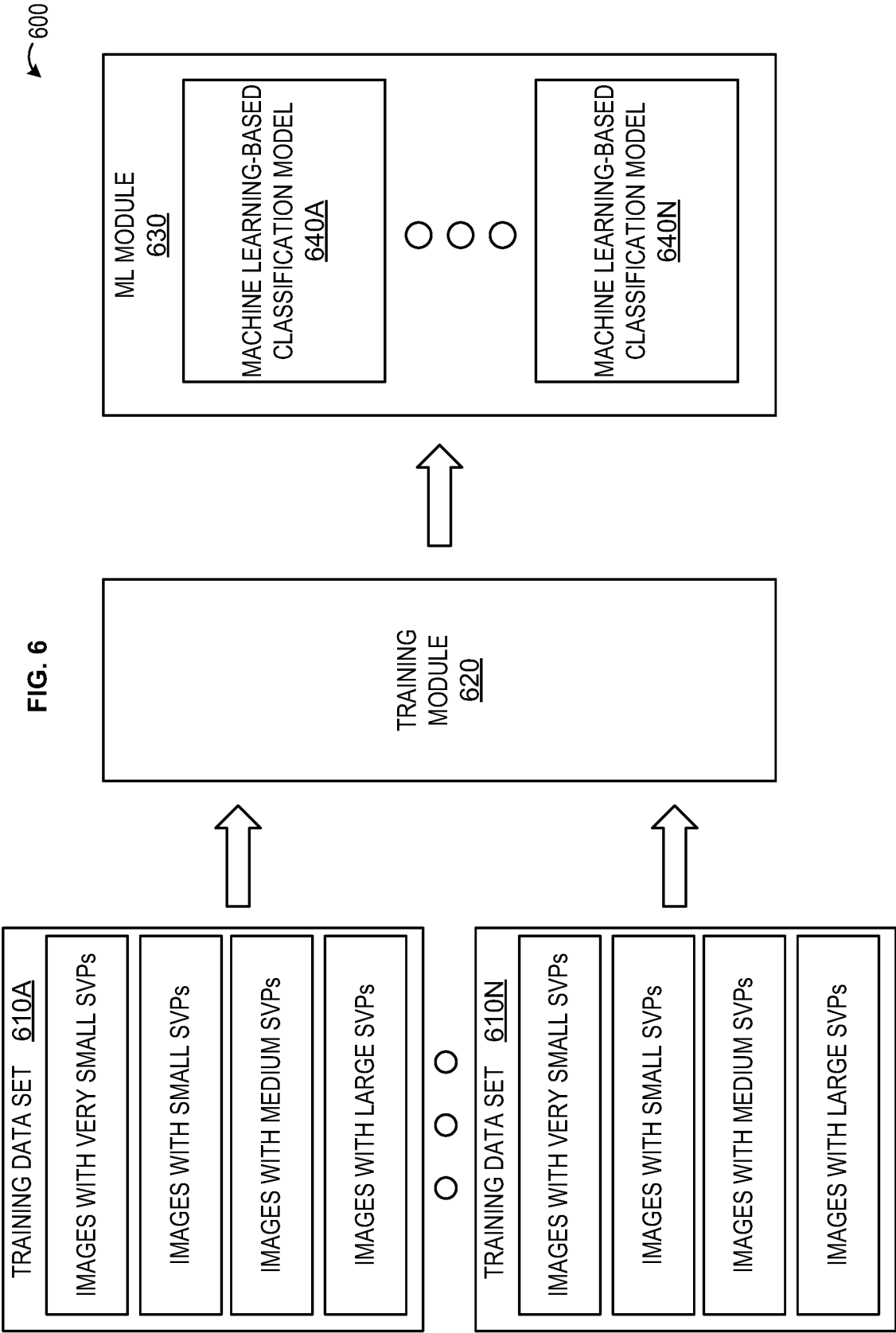
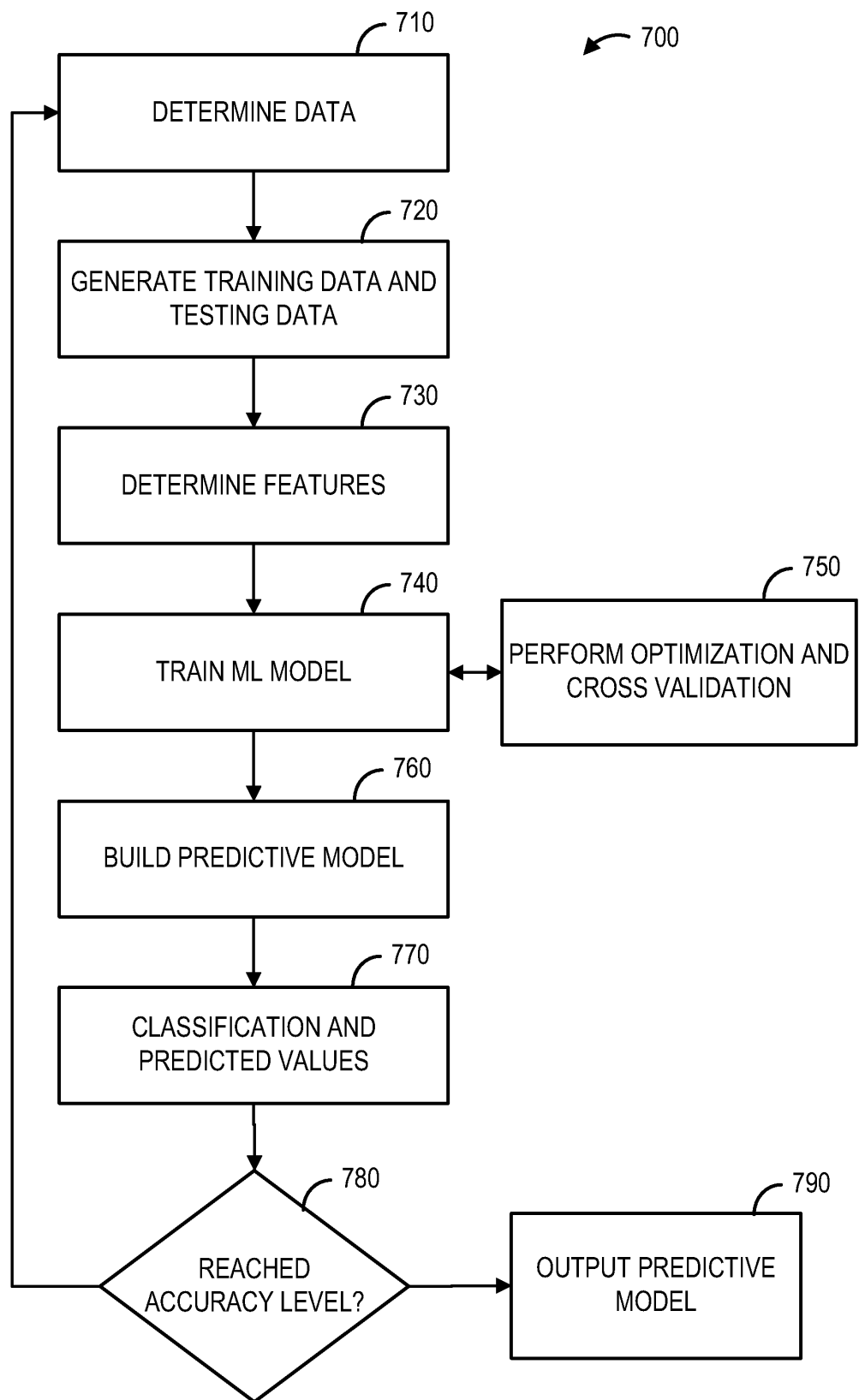


FIG. 7



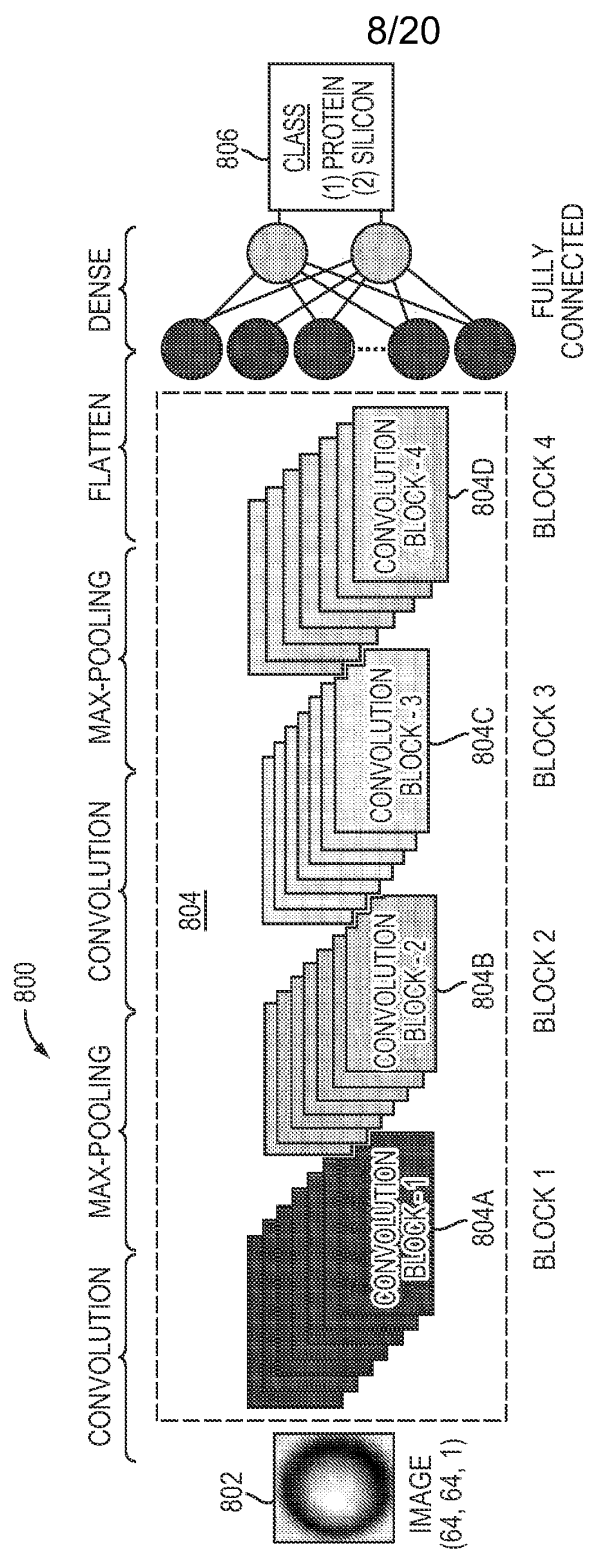


FIG. 8

FIG. 9

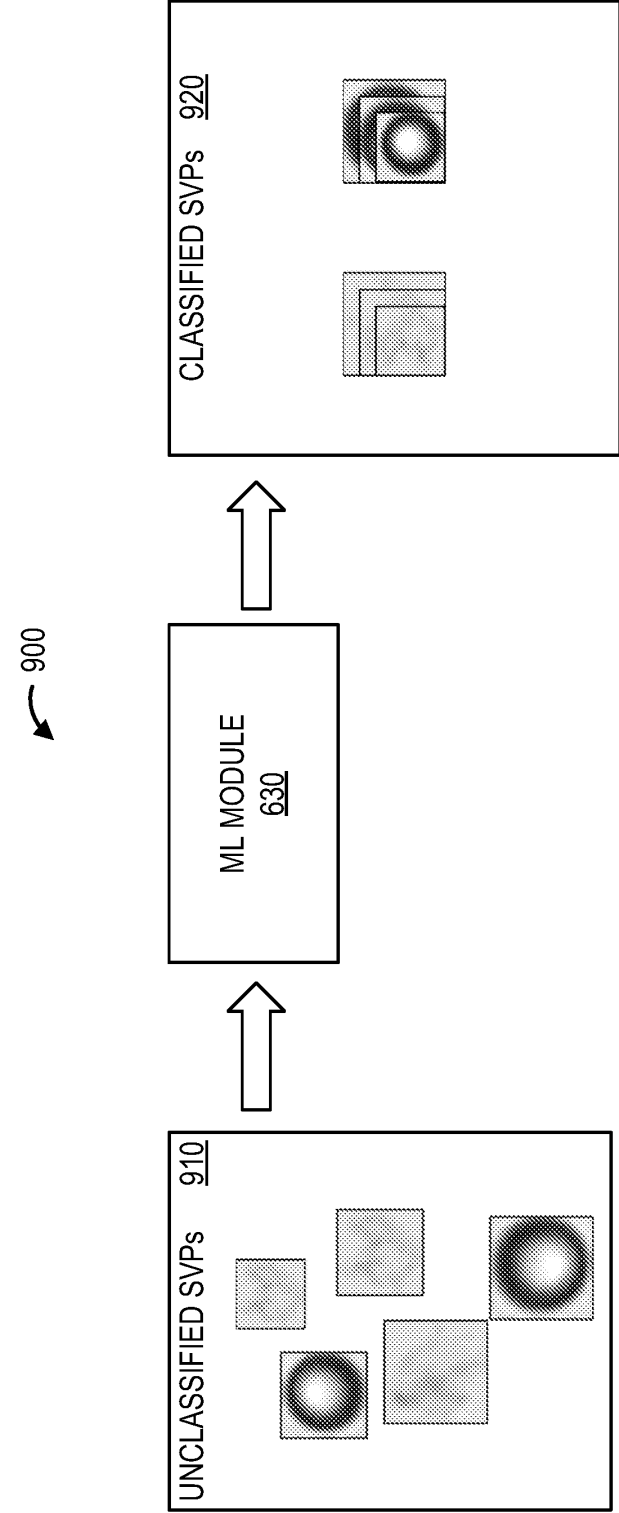


FIG. 10

<u>Silicon</u>			
Particle ECD Size	<u>Full Set</u>	<u>Train Set (80%)</u>	<u>Test Set (20%)</u>
Very Small (<2uM)	3920	3146	774
Small ($\geq 2\text{uM}$, <10uM)	3526	2814	712
Medium ($\geq 10\text{uM}$ <25uM)	54	40	14
Large ($\geq 25\text{uM}$)	0	0	0
	7500	6000	1500

<u>Protein</u>			
Particle ECD Size	<u>Full Set</u>	<u>Train Set (80%)</u>	<u>Test Set (20%)</u>
Very Small (<2uM)	3017	2416	601
Small ($\geq 2\text{uM}$, <10uM)	3991	3194	797
Medium ($\geq 10\text{uM}$, <25uM)	435	346	89
Large ($\geq 25\text{uM}$)	57	44	13
	7500	6000	1500

FIG. 11

Experiment Title	Batch Size	Dropout Rate	Activation Function	Cross-Validation Score
2.4.1	64	0.1	ReLU	0.846
2.4.2	64	0.15	ReLU	0.61
2.4.3	64	0.2	ReLU	0.624
2.4.4	128	0.1	ReLU	0.721
2.4.5	128	0.15	ReLU	0.937
2.4.6	128	0.2	ReLU	0.613
2.4.7	64	0.1	Tanh	0.167
2.4.8	64	0.15	Tanh	0.219
2.4.9	64	0.2	Tanh	0.167
2.4.10	128	0.1	Tanh	0.419
2.4.11	128	0.15	Tanh	0.167
2.4.12	128	0.2	Tanh	0.171

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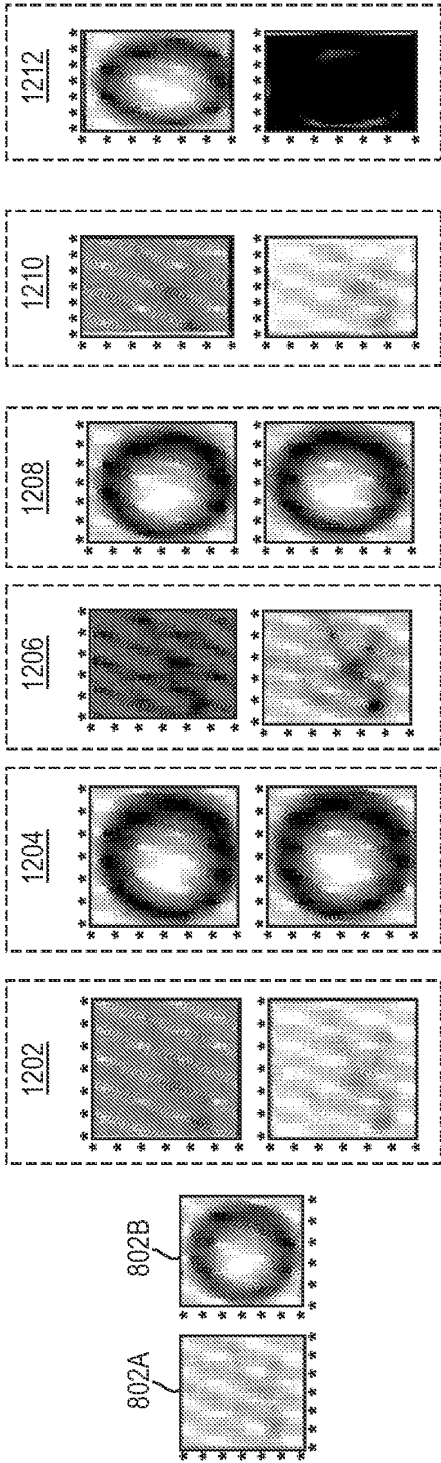


FIG. 12

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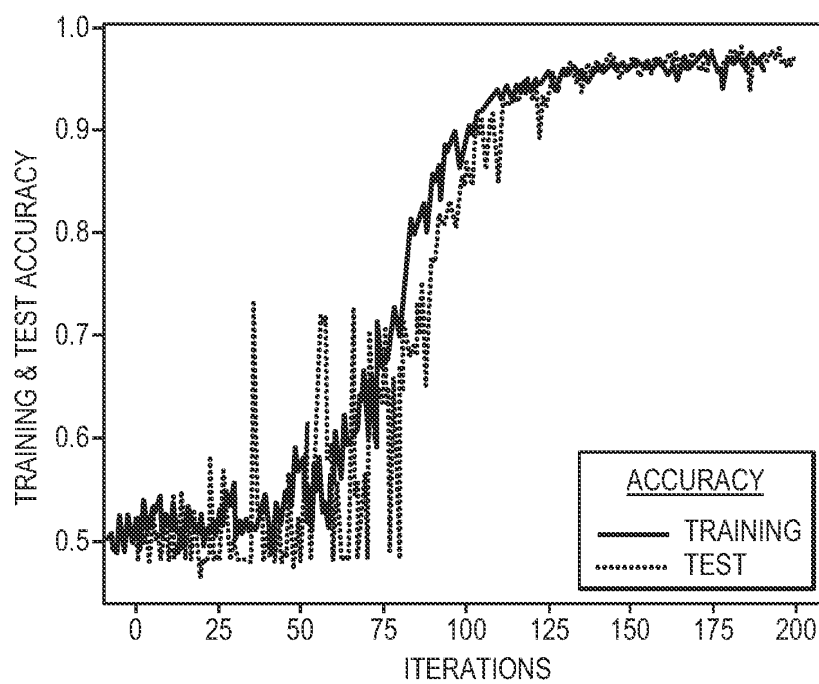


FIG. 13

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	TRUE PROTEIN	TRUE SILICON
CORRECT PREDICTION	81%	96%
INCORRECT PREDICTION	19%	4%

FIG. 14A

	SMALL	MEDIUM	LARGE
CORRECT PREDICTION	84%	94%	98%
INCORRECT PREDICTION	16%	6%	2%

FIG. 14B

	TRUE PROTEIN	TRUE SILICON
CORRECT PREDICTION	98%	94%
INCORRECT PREDICTION	2%	6%

FIG. 14C

	SMALL	MEDIUM	LARGE
CORRECT PREDICTION	94%	100%	99%
INCORRECT PREDICTION	6%	0%	1%

FIG. 14D

FIG. 15

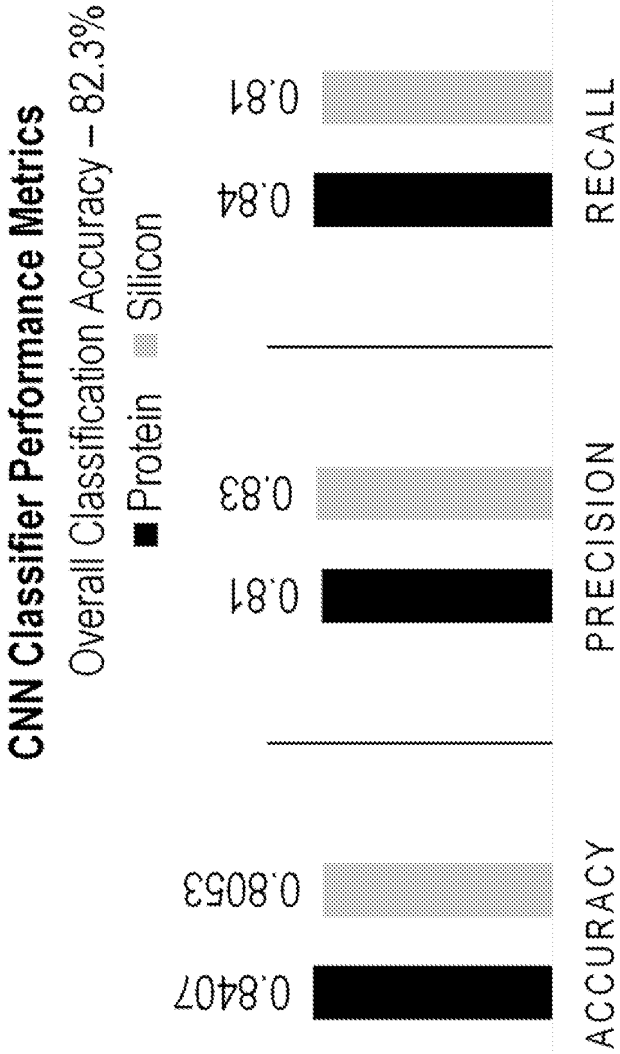
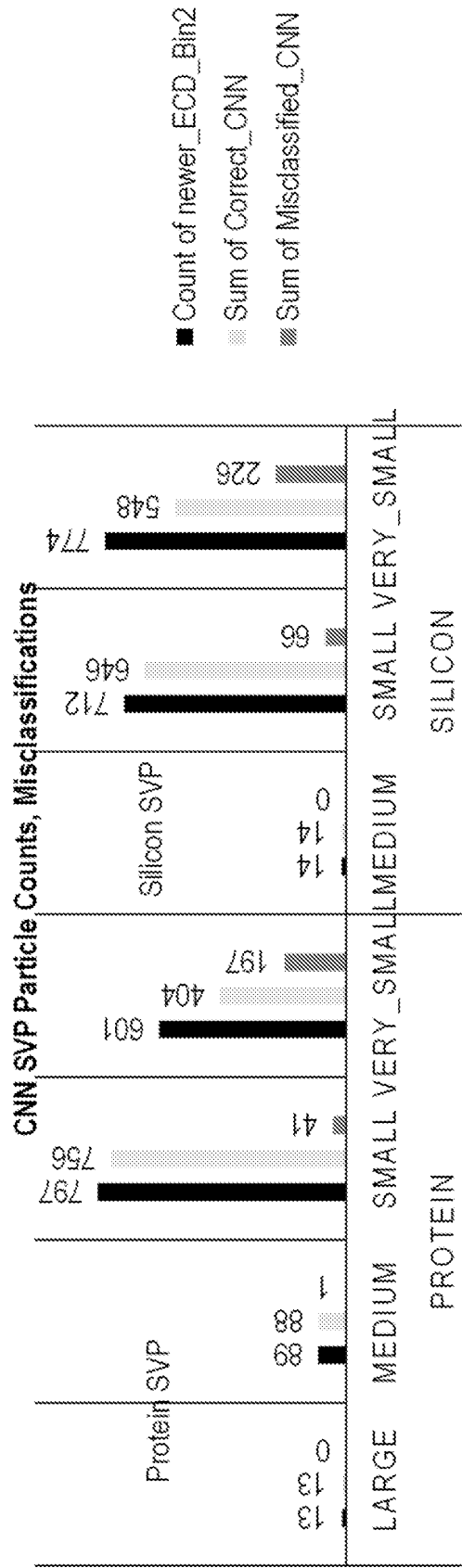


FIG. 16



1700 ↗

FIG. 17

