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| --- | --- | --- | --- |
| Database | Step | Search Terms | Result |
| PubMed | 1 | ((((cardiovascular disease[MeSH Terms]) OR (Kidney Diseases[MeSH Terms]) OR (Nervous System Diseases[MeSH Terms]) OR (Endocrine System Diseases[MeSH Terms]) OR (Metabolic Diseases[MeSH Terms]) OR (Liver Diseases[MeSH Terms]) OR (Hematologic Diseases[MeSH Terms]) OR (digestive system diseases[MeSH Terms]) OR (Immune System Diseases[MeSH Terms])) AND (eye[MeSH Terms]))) | 84,772 |
|  | 2 | (retinal image OR fundus photo OR "optical coherence tomography" OR "anterior segment" OR external eye photo) AND (machine learning OR transfer learning OR deep learning OR automatic framework OR SVM OR random forest OR neural network) | 2,357 |
|  | 3 | 1 AND 2 | 338 |
|  | 4 | 3 Filters: from 1996 - 2021 | 335 |
| Web of Science | 1 | ((((((((((((((((TS=(cardiovascular)) OR TS=(cerebrovascular)) OR TS=(Alzheimer)) OR TS=(dementia)) OR TS=(cognitive disorder)) OR TS=(systemic)) OR TS=(stroke)) OR TS=(kidney)) OR TS=(renal)) OR TS=(heart)) OR TS=(liver)) OR TS=(peripheral)) OR TS=(hypertension)) OR TS=(hyperglycemia)) OR TS=(anemia)) OR TS=(hyperlipidemia)) NOT ((((((((((((((((TS=(Visual loss)) OR TS=(Disorder of refraction and accommodation )) OR TS=(Senile cataract )) OR TS=(Cataract\*)) OR TS=(Pseudophakia)) OR TS=(macular degeneration)) OR TS=(conjunctivitis)) OR TS=(keratitis)) OR TS=(Ocular hypertension)) OR TS=(Optic)) OR TS=(Macular pucker)) OR TS=(Pan uveitis)) OR TS=(Ocular laceration)) OR TS=(intravascular)) OR TS=(retinopathy)) OR TI=(Glaucoma)) | 5,423,098 |
|  | 2 | (((((((((TS=(screening)) OR TS=(detection)) OR TS=(diagnose)) OR TS=(diagnosing)) OR TS=(risk assessment)) OR TS=(biomarker)) OR TS=(risk stratification)) OR TS=(prediction)) OR TS=(predict)) | 7,108,099 |
|  | 3 | TS=(retina\*) AND ((((((TS=(image)) OR TS=(optical coherence tomography)) OR TS=(optical coherence tomography angiography)) OR TS=(optical coherence tomographic angiography)) OR TS=(anterior segment)) OR TS=(external eye)) | 55,381 |
|  | 4 | ((((((((((((TS=(random forest)) OR TS=(machine learning)) OR TS=(transfer learning)) OR TS=(deep learning)) OR TS=(automatic framework)) OR TS=(nomogram)) OR TS=(lasso)) OR TS=(support vector machine)) OR TS=(ensemble)) OR TS=(embedded)) OR TS=(neural network)) OR TS=(algorithm)) | 3,547,570 |
|  | 5 | 1 AND 2 AND 3 AND 4 [publication date 1996-2021] | 148 |
|  | 6 | 5 NOT (((TI=(meta-analysis)) OR TI=(systematic review)) OR TI=(case report)) [publication date 1996-2021] | 147 |
| Google Scholar\* | 1 | (cerebrovascular OR cognitive OR stroke) AND (retinal image OR "optical coherence tomography" OR "anterior segment" OR external eye photo) AND (machine learning OR transfer learning OR deep learning OR automatic OR SVM OR random forest OR neural network) Filters: from 1996 - 2021 | 16,600 |
|  | 2 | (systemic OR cardiovascular) AND (retinal image OR "optical coherence tomography" OR "anterior segment" OR external eye photo) AND (machine learning OR transfer learning OR deep learning OR automatic OR SVM OR random forest OR neural network) Filters: from 1996 - 2021 | 8,940 |
|  | 3 | (kidney OR heart OR liver OR immune) AND (retinal image OR "optical coherence tomography" OR "anterior segment" OR external eye photo) AND (machine learning OR transfer learning OR deep learning OR automatic framework OR SVM OR random forest OR neural network) Filters: from 1996 - 2021 | 14,000 |
|  | 4 | (blood OR peripheral) AND (retinal image OR "optical coherence tomography" OR "anterior segment" OR external eye photo) AND (machine learning OR transfer learning OR deep learning OR automatic framework OR SVM OR random forest OR neural network) Filters: from 1996 - 2021 | 16,400 |
|  | 5 | (hyperglycemia OR hypoxia OR hyperlipidemia) AND (retinal image OR "optical coherence tomography" OR "anterior segment" OR external eye photo) AND (machine learning OR transfer learning OR deep learning OR automatic framework OR SVM OR random forest OR neural network) Filters: from 1996 - 2021 | 860 |

\*Google Scholar is a broad search engine and only used for hand picking missed papers.